





# 961 - 971 Meridian Avenue **Mixed-Use Development**



**Transportation Analysis** 

Prepared for:

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# **Executive Summary**

This report presents the results of a Transportation Analysis (TA) for the proposed mixed-use development at 961 – 971 Meridian Avenue in the City of San José. The 2.09 +/- acre project site is comprised of two parcels (APN 284-030-15, -016) located west of Meridian Avenue between Fruitdale Avenue and Curci Drive. The project site is located within a planned growth area (proposed Southwest Expressway Urban Village) per the Envision San Jose 2040 General Plan. According to the Envision San Jose 2040 General Plan, the Urban Village strategy fosters:

- Mixed residential and employment activities that are attractive to an innovative workforce
- Revitalization of underutilized properties that have access to existing infrastructure
- Densities that support transit use, bicycling, and walking
- High-quality urban design

As proposed, the project would demolish two vacant single-family homes on-site and construct a building consisting of 233 affordable residential units and approximately 1,780 square feet of retail space. The project proposes one level of below-grade parking and one level of above-grade parking which would provide 290 parking spaces. Vehicular access to the project site would be provided via a full-access driveway on Meridian Avenue along the south side of the project site. A secondary truck access driveway would be located along the northern edge of the site and would provide access to a truck loading dock and fire lane that runs along the perimeter of the project site.

# **Transportation Analysis Scope**

The transportation analysis of the project was evaluated following the standards and methodologies set forth in the City of San Jose's *Transportation Analysis Handbook 2018*, the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program's *Transportation Impact Guidelines* (October 2014), and by the California Environmental Quality Act (CEQA). Based on the City of San Jose's Transportation Policy and *Transportation Analysis Handbook 2018*, the TA report for the project consists of a CEQA vehicle-miles-traveled (VMT) analysis and a supplemental Local Transportation Analysis (LTA).

# **CEQA Transportation Analysis Scope**

The CEQA transportation analysis for the project consists a project-level VMT impact analysis using the City's VMT tool and a cumulative impact analysis that demonstrates the project's consistency with the Envision San Jose 2040 General Plan.



#### **CEQA Transportation Analysis Exemption Criteria**

The City of San Jose *Transportation Analysis Handbook* identifies screening criteria that determines whether a CEQA transportation analysis would be required for development projects. The criteria are based on the type of project, characteristics, and/or location. If a project meets the City's screening criteria, the project is expected to result in less-than-significant VMT impacts and a detailed CEQA VMT analysis is not required.

The project site is located within a planned Growth Area (proposed Southwest Expressway Urban Village) with low VMT per capita as identified by the City of San Jose. The residential component of the proposed project will meet all of the applicable VMT screening criteria for affordable residential projects and the proposed 1,780 s.f. of retail space is less than the 100,000 s.f. retail threshold screening criterion for local-serving retail. Therefore, both the residential and retail components of the proposed project are screened from the evaluation of VMT and are considered to result in a less-than significant VMT impact.

#### **Cumulative (GP Consistency) Evaluation**

Projects must demonstrate consistency with the *Envision San José 2040 General Plan* to address cumulative impacts. Consistency with the City's General Plan is based on the project's density, design, and conformance to the General Plan goals and policies. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required per the City's *Transportation Analysis Handbook*.

The proposed project will be consistent with General Plan policy TR-3.3 that states:

As part of the development review process, require that new development along existing and
planned transit facilities consist of land use and development types and intensities that
contribute towards transit ridership. In addition, require that new development is designed to
accommodate and to provide direct access to transit facilities.

The project is consistent with the General Plan goals and policies for the following reasons:

- The project site adjacent to bus stops on Meridian Avenue.
- The project site is in close proximity to the Fruitdale LRT station that is located within 1/3 of a mile from the project site at the southwest corner of the intersection of Southwest Expressway and Fruitdale Avenue. The Mountain View-Winchester LRT line provides access to the Diridon Transit Center, located approximately two miles north of the project site. Connections between local and regional bus routes, light rail lines, and commuter rail lines are provided within the Diridon Transit Center.
- The project frontage along Meridian Avenue will be designed to be consistent with planned streetscape design features of Grand Boulevards, such as wider sidewalks.

Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be considered as part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

#### **Local Transportation Analysis**

The intersection operations analysis is intended to quantify the operations of intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect on a study intersection operation is not considered a CEQA impact metric. The LTA includes the



analysis of AM and PM peak-hour traffic conditions for three signalized intersections and two unsignalized intersections, following the standards and methodology set forth by the City of San Jose.

#### **Trip Generation**

After applying the ITE trip rates and appropriate trip reductions, it is estimated that the project would generate an additional 1,044 daily vehicle trips, with 69 trips (18 inbound and 51 outbound) occurring during the AM peak hour and 88 trips (53 inbound and 35 outbound) occurring during the PM peak hour.

#### **Future Intersection Operation Conditions**

The operations analysis shows that all signalized study intersections would continue to operate at an acceptable LOS D or better during both the AM and PM peak hours, under background conditions, and background plus project conditions.

The results of the peak-hour traffic signal warrant checks indicate that the unsignalized study intersections are projected to have traffic volumes that would fall below the thresholds that warrant signalization under all future study conditions.

#### **Site Access and On-Site Circulation**

Site access was evaluated to determine the adequacy of the site's access points with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

# Recommended Site Access and On-Site Circulation Improvements

<u>Provide Turn Around Space.</u> It is recommended that the drive aisle serving the retail parking spaces be widened to provide additional space for a vehicle to turn around or the northernmost security gate could be moved west by approximately one car-length (or 25 feet) so that a turn-around space could be provided at the northern end of the drive aisle.

<u>Fire Lane Clearance</u>. The fire lane, which is shown to be between 20 to 26 feet wide, should be provided a 26-foot wide horizontal clearance to accommodate emergency vehicles.

## **Parking Supply**

#### Vehicular Parking

Based on the City's parking requirements, the project would be required to provide a total of 398 parking spaces before any reductions. However, a 20 percent reduction can be granted for proposed projects within an Urban Village which provide bicycle parking spaces per City requirements. Based on the City's parking code and an application of a 20 percent Urban Village reduction, the project would be required to provide a total of 319 vehicle parking spaces (311 spaces for the residential use and 8 spaces for the retail use).

The project is proposing to provide a total of 290 parking spaces on-site, consisting of 282 spaces for the residential use and 8 spaces for the retail use. Based on the City code, sufficient parking would be provided for the retail use. The project proposes an additional 9% reduction from the City requirement for the residential use.



#### **Bicycle Parking**

According to the City's Bicycle Parking Standards (Chapter 20.90, Table 20-210), the project is required to provide a total of 62 bicycle parking spaces consisting of 25 short-term parking spaces and 37 long-term parking spaces. A long-term bicycle storage room and short-term bicycle storage room will be located within the ground-floor level of the parking garage. The project proposes to provide a total of 63 bicycle parking spaces consisting of 26 short-term parking spaces and 37 long-term parking spaces. Therefore, the proposed bicycle parking of the project will exceed the City's Bicycle Parking Standards.

# Pedestrian, Bicycle, and Transit Analysis

#### **Pedestrian Facilities**

Existing sidewalks along Meridian Avenue, Fruitdale Avenue, and Willow Street provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity, including the Fruitdale LRT Station and Blackford Elementary School. Pedestrian access across SR-17 is provided via a pedestrian footbridge connecting Westfield Avenue and Downing Avenue. Although no sidewalks are provided along Meridian Avenue between Fruitdale Avenue and Parkmoor Avenue, a footbridge across I-280 is provided west of Meridian Avenue between Parkmoor Avenue and Moorpark Avenue. Sidewalks along Race Street may also be used to cross the I-280 corridor.

Meridian Avenue has been designated as a Grand Boulevard within the Envision 2040 General Plan. Grand Boulevards are intended to serve as major transportation corridors with priority given to public transit. The City encourages developments to provide a minimum 20-foot wide sidewalk along most Grand Boulevard frontages. However, it should be noted that the proposed 15-foot sidewalk width is consistent with the minimum frontage sidewalk widths required by most other adopted Urban Village plans in San Jose (there is no adopted plan for the Southwest Expressway Urban Village). The intersection of Meridian Avenue and Curci Drive provides an east-west crosswalk along its south approach only. The installation of an east-west crosswalk across its north approach would reduce by approximately 200 feet the walking distance between the project site and the nearest northbound bus stop along Meridian Avenue. However, a protected pedestrian phase cannot be provided for a north approach crosswalk since there is no westbound approach leg. Therefore, the addition of a crosswalk on the north leg is not recommended. In addition, the curb ramps located at the intersection's northwest and southeast corners are not ADA compatible. The project will be required to make a fair-share contribution the improvements of the intersection curb ramps.

#### **Bicycle Facilities**

The bikeways within the vicinity of the project site would remain unchanged under project conditions. There are currently no bike lanes along Meridian Avenue in the vicinity of the project site. However, there are bike lanes provided along Southwest Expressway and Willow Street, less than  $\frac{1}{2}$  mile from the project site.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

#### Class II bike lanes are planned for:

- Fruitdale Avenue, between Southwest Expressway and Race Street
- Race Street, between Fruitdale Avenue and Parkmoor Avenue



#### **Transit Services**

The project site is adequately served by the existing VTA transit services. The project site is primarily served by three VTA bus routes: Frequent Bus Route 25, Local Bus Route 64B, and Express Bus Route 103. Additionally, the Fruitdale LRT Station is located within 1/3 of a mile from the project site at the southwest corner of the intersection of Southwest Expressway and Fruitdale Avenue. LRT service at the Fruitdale LRT Station is provided by the Mountain View-Winchester LRT line. The Mountain View-Winchester LRT line provides access to the Diridon Transit Center, located approximately two miles north of the project site. Connections between local and regional bus routes, light rail lines, and commuter rail lines are provided within the Diridon Transit Center. The new transit trips generated by the project are not expected to create demand in excess of the transit service that is currently provided.

# Freeway Off-Ramp Analysis

#### Race Street and I-280 Northbound Off-Ramp

The intersection Race Street and I-280 Northbound Off-Ramp is a one-way stop-controlled intersection. A westbound left-turn queue of approximately two and four vehicles are estimated to form during the AM and PM peak hours, respectively, at this off-ramp. The existing 400-foot storage length of the left-turn lane can accommodate the estimated queues. The addition of approved trips and project traffic increases the critical delay of the westbound left-turn movement. However, the westbound left-turn queue is not expected to increase during the AM and PM peak hours. Signal warrant analysis also indicates that traffic volumes at this stop-controlled intersection will not exceed the thresholds that warrant signalization under any of the study scenarios.

#### Meridian Avenue and I-280 Southbound Off-Ramp

The I-280 southbound off-ramp at Meridian Avenue is an uncontrolled free-way off-ramp. During the PM peak hour, the southbound queue at Meridian Avenue and Fruitdale Avenue intersection was observed to extend back to the I-280 southbound off-ramp. The queue on Meridian Avenue causes vehicles from the off-ramp to form a short queue (maximum of two vehicles) on the off-ramp as they merge.

Based on the project trip assignment, the project will add approximately 5 and 16 trips from the offramp onto Meridian Avenue during the AM and PM peak-hour, respectively. Given that the ramp currently exhibits only minor queuing, it can be expected that the small number of additional project trips will not significantly worsen the existing queue.

# **Trip Reduction (TDM Program)**

The project is proposing a 29% reduction in required off-street parking. A 20% reduction can be granted for the project located within an Urban Village. In order to be granted an additional 9% reduction in required off-street parking, the project will be required to establish a TDM program that will reduce the parking demand for the proposed residential units. The TDM program should encourage multimodal travel and use of the extensive bus service and pedestrian/bicycle facilities in the immediate project area to the maximum extent possible. The applicant/property owner should manage the TDM program to ensure tenant participation. The project will be required to submit and have approved by the City its TDM program.



# 1.

# Introduction

This report presents the results of a Transportation Analysis (TA) for the proposed mixed-use development at 961 – 971 Meridian Avenue in the City of San José. The 2.09 +/- acre project site is comprised of two parcels (APN 284-030-15, -016) located west of Meridian Avenue between Fruitdale Avenue and Curci Drive. The project site location and the surrounding study area are shown on Figure 1. The project site is located within a planned growth area (proposed Southwest Expressway Urban Village) per the Envision San Jose 2040 General Plan. However, the City has not yet adopted a plan for the Southwest Expressway Urban Village. According to the Envision San Jose 2040 General Plan, the Urban Village strategy fosters:

- Mixed residential and employment activities that are attractive to an innovative workforce
- Revitalization of underutilized properties that have access to existing infrastructure
- Densities that support transit use, bicycling, and walking
- High-quality urban design

As proposed, the project would demolish two vacant single-family homes on-site and construct a building consisting of 233 affordable residential units and approximately 1,780 square feet of retail space. The project proposes one level of below-grade parking and one level of above-grade parking which would provide 290 parking spaces. Vehicular access to the project site would be provided via a full-access driveway on Meridian Avenue along the south side of the project site. A secondary truck access driveway would be located along the northern edge of the site and would provide access to a truck loading dock and fire lane that runs along the perimeter of the project site. The project site plan is shown on Figure 2.

The transportation analysis of the project was evaluated following the standards and methodologies set forth in the City of San Jose's Transportation Analysis Policy (Council Policy 5-1), the City of San Jose's *Transportation Analysis Handbook 2018*, the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program's *Transportation Impact Guidelines* (October 2014), and by the California Environmental Quality Act (CEQA). Based on the City of San Jose's Transportation Policy and *Transportation Analysis Handbook 2018*, the TA report for the project consists of a CEQA vehicle-milestraveled (VMT) analysis and a supplemental Local Transportation Analysis (LTA).

# **Transportation Policies**

Historically, transportation analysis has utilized delay and congestion on the roadway system as the primary metric for the identification of traffic impacts and potential roadway improvements to relieve traffic congestion that may result due to proposed/planned growth. However, the State of California has recognized the limitations of measuring and mitigating only vehicle delay at intersections and in 2013



Figure 1
Site Location

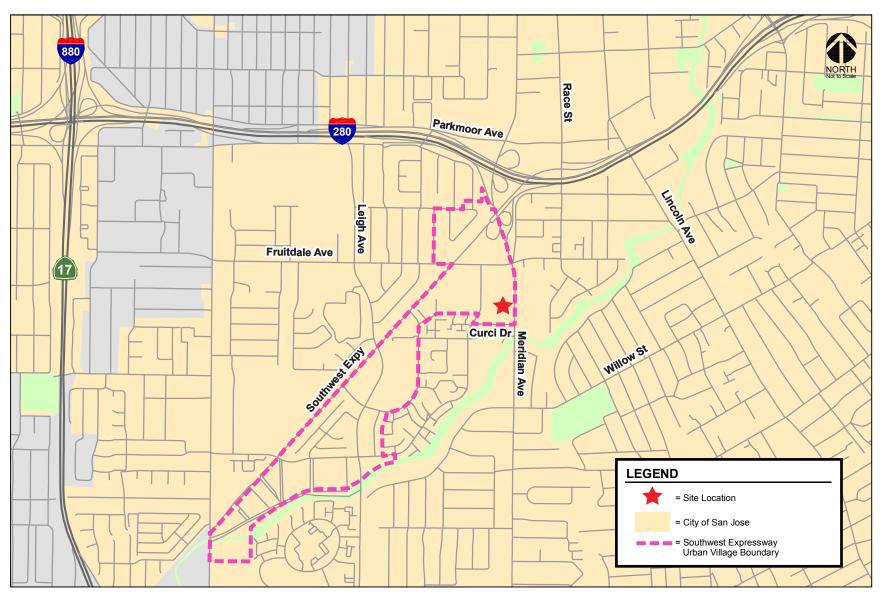
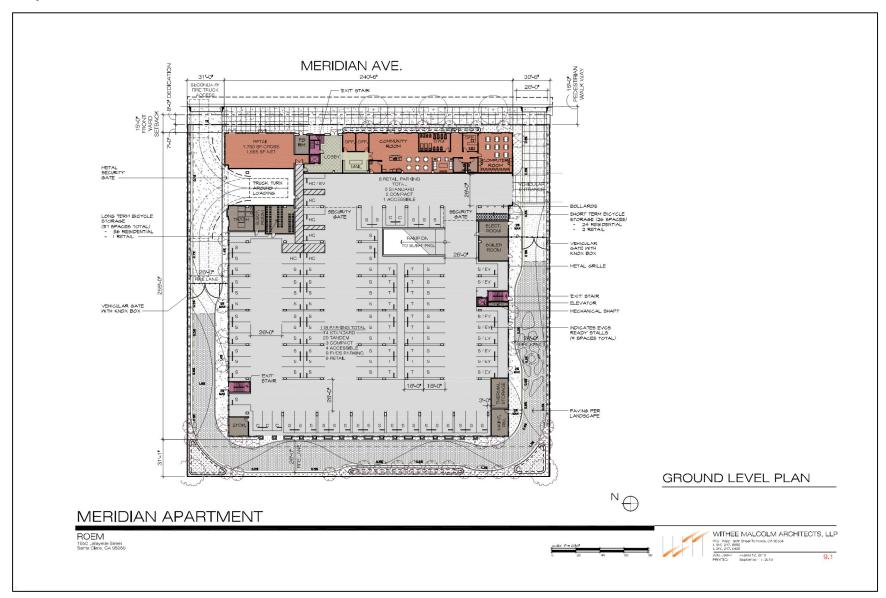




Figure 2 Proposed Site Plan





passed Senate Bill (SB) 743, which requires jurisdictions to stop using congestion and delay metrics, such as Level of Service (LOS), as the measurement for CEQA transportation analysis. With the adoption of SB 743 legislation, public agencies will soon be required to base the determination of transportation impacts on Vehicle Miles Traveled (VMT) rather than level of service.

In adherence to SB 743, the City of San Jose has adopted a new Transportation Analysis Policy, Council Policy 5-1. The policy replaces its predecessor (Policy 5-3) and establishes the thresholds for transportation impacts under the CEQA based on vehicle miles traveled (VMT) instead of levels of service (LOS). The intent of this change is to shift the focus of transportation analysis under CEQA from vehicle delay and roadway auto capacity to a reduction in vehicle emissions, and the creation of robust multimodal networks that support integrated land uses. The new transportation policy aligns with the currently adopted General Plan which seeks to focus new development growth within Planned Growth Areas, bringing together office, residential, and supporting service land uses to internalize trips and reduce VMT. All new development projects are required to analyze transportation impacts using the VMT metric and conform to Council Policy 5-1.

The Circulation Element of the *Envision San José 2040 General Plan* includes a set of balanced, long-range, multi-modal transportation goals and policies that provide for a transportation network that is safe, efficient and sustainable (minimizes environmental, financial, and neighborhood impacts). These transportation goals and policies are intended to improve multi-modal accessibility to all land uses and create a city where people are less reliant on driving to meet their daily needs. The Envision San Jose 2040 General Plan contains the following policies to encourage the use of non-automobile transportation modes to minimize vehicle trip generation and reduce VMT:

- Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects (TR-1.2);
- Through the entitlement process for new development, projects shall be required to fund or construct needed transportation improvements for all transportation modes, giving first consideration to improvement of biking, walking and transit facilities and services that encourage reduced vehicle travel demand (TR-1.4):
- Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements (TR-2.8);
- As part of the development review process, require that new development along existing and
  planned transit facilities consist of land use and development types and intensities that contribute
  towards transit ridership. In addition, require that new development is designed to accommodate
  and to provide direct access to transit facilities (TR-3.3);
- Discourage, as part of the entitlement process, the provision of parking spaces significantly above the number of spaces required by code for a given use (TR-8.4);
- Allow reduced parking requirements for mixed-use developments and for developments providing shared parking or a comprehensive transportation demand management (TDM) program, or developments located near major transit hubs or within Villages and Corridors and other growth areas (TR-8.6);
- Encourage private property owners to share their underutilized parking supplies with the general public and/or other adjacent private developments (TR-8.7);



- Within new development, create and maintain a pedestrian-friendly environment by connecting
  the internal components with safe, convenient, accessible, and pleasant pedestrian facilities and
  by requiring pedestrian connections between building entrances, other site features, and
  adjacent public streets (CD-3.3);
- Create a pedestrian-friendly environment by connecting new residential development with safe, convenient, accessible, and pleasant pedestrian facilities. Provide such connections between new development, its adjoining neighborhood, transit access points, schools, parks, and nearby commercial areas (LU-9.1);
- Encourage all developers to install and maintain trails when new development occurs adjacent to a designated trail location. Use the City's Parkland Dedication Ordinance and Park Impact Ordinance to have residential developers build trails when new residential development occurs adjacent to a designated trail location, consistent with other parkland priorities. Encourage developers or property owners to enter into formal agreements with the City to maintain trails adjacent to their properties (PR-8.5).

# **CEQA Transportation Analysis Scope**

The CEQA transportation analysis for the project consists a project-level VMT impact analysis using the City's VMT tool and a cumulative impact analysis that demonstrates the project's consistency with the Envision San Jose 2040 General Plan.

## **VMT Analysis**

The City of San Jose's Transportation Analysis Policy establishes procedures for determining project impacts on VMT based on project description, characteristics, and/or location. The City of San Jose defines VMT as the total miles of travel by personal motorized vehicles a project is expected to generate in a day. VMT is calculated for residential, office, and industrial projects using the Origin-Destination VMT method, which measures the full distance of personal motorized vehicle-trips with one end within the project. A project's VMT is compared to established thresholds of significance based on the project location and type of development. When assessing a residential project, the project's VMT is divided by the number of residents expected to occupy the project to determine the VMT per capita. When assessing an office or industrial project, the project's VMT is divided by the number of employees.

Typically, development projects that are farther from other, complementary land uses (such as a business park far from housing) and in areas without transit or active transportation infrastructure (bike lanes, sidewalks, etc.) generate more driving than development near complementary land uses with more robust transportation options. Therefore, developments located in a central business district with high density and diversity of complementary land uses and frequent transit services are expected to internalize trips and generate shorter and fewer vehicle trips than developments located in a suburban area with low density of residential developments and no transit serve in the project vicinity.

#### **VMT Evaluation Tool**

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for development projects. For non-residential or non-office projects, very large projects, or projects that can potentially shift travel patterns, the City's Travel Demand Model can be used to determine project VMT.

Based on the assessor's parcel number (APN) of a project, the evaluation tool identifies the existing average VMT per capita and VMT per employee for the project area. Based on the project location, type of development, project description, and proposed trip reduction measures, the evaluation tool calculates



the project VMT. Projects located in areas where the existing VMT is above the established threshold are referred to as being in "high-VMT areas". Projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the extent possible.

The thresholds of significance for development projects, as established in the Transportation Analysis Policy, are based on the existing citywide average VMT level for residential uses and the existing regional average VMT level for employment uses. Figure 3 and Figure 4 show the current Citywide VMT levels estimated by the City's TDF model for residents and workers, respectively, based on the locations of residences and jobs. Areas are color-coded based on the level of existing VMT:

- Green-filled areas are parcels with existing VMT less than the City's residential and employee thresholds of 10.12 VMT per capita and 12.21 per employee. The thresholds are calculated by subtracting 15 percent from the citywide average of 11.91 VMT per capita and regional average of 14.37 per employee.
- Yellow-filled areas are parcels with existing VMT between the residential and employee thresholds and the city-wide average of 11.91 VMT per capita and regional average 14.37 VMT per employee.
- Orange-filled areas are parcels with existing VMT greater than the residential and employee thresholds. However, a project's VMT impact may be mitigated by implementing VMT-reducing measures.
- Red-filled areas are parcels with existing VMT greater than the residential and employee threshold. Implementing VMT-reducing measures will not be sufficient to reduce a project's VMT to less than the threshold of significance.

Average per-capita and per-employee VMT for all the existing developments within ½ mile buffer of each parcel in the City serves as the baseline from which a project is evaluated. The VMT in the proposed project site vicinity is presented in further detail in Chapter 3.

#### **Screening for VMT Analysis**

The City's VMT methodology includes screening criteria that are used to identify types, characteristics, and/or locations of projects that would not exceed the CEQA thresholds of significance. If a project or a component of a mixed-use project meets the screening criteria, it is then presumed that the project or the component would result in a less-than-significant VMT impact and a VMT analysis is not required. The type of development projects that may meet the screening criteria include the following:

- (1) small infill projects
- (2) local-serving retail
- (3) local-serving public facilities
- (4) projects located in Planned Growth Areas with low VMT and High-Quality Transit
- (5) deed-restricted affordable housing located in Planned Growth Areas with High-Quality Transit

Table 1 summarizes the screening criteria for each type of development project as identified in the in the City of San Jose Transportation Analysis Handbook. Figure 5 and Figure 6 identify areas within the City that currently have low VMT levels estimated by the City for residents and workers, respectively, for which transit supportive development located within a priority growth area would be screened out of the evaluation of VMT.



Figure 3 VMT per Capita Heat Map in San Jose

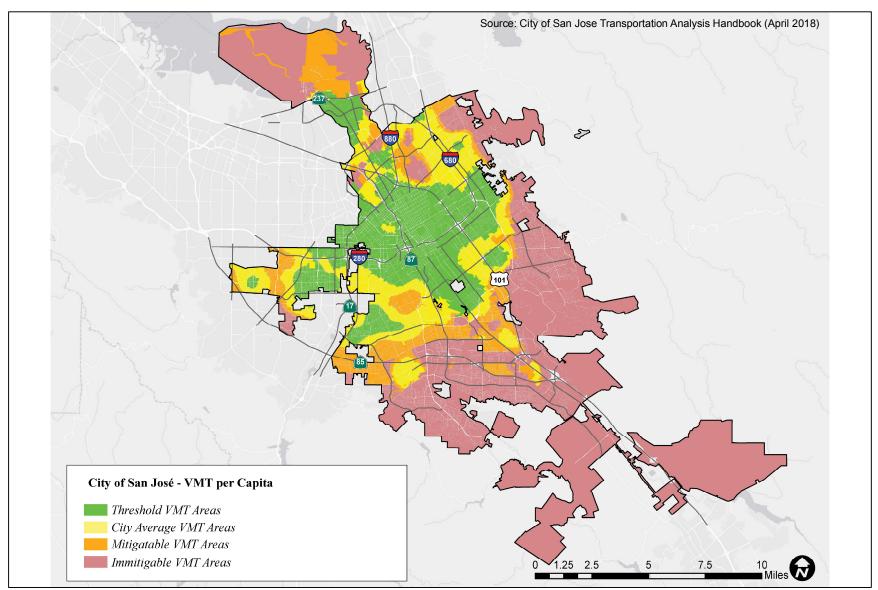




Figure 4 VMT per Job Heat Map in San Jose

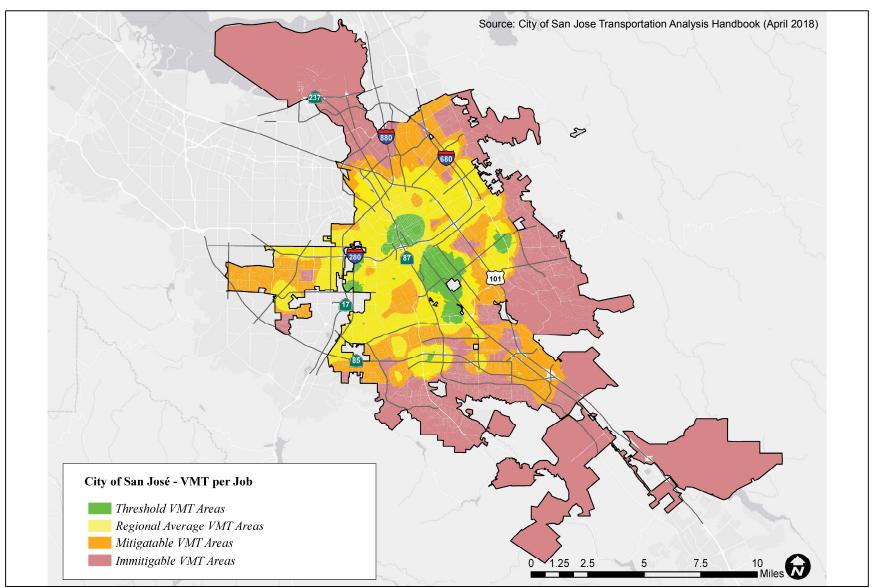




Figure 5 Low VMT per Capita Areas in San Jose

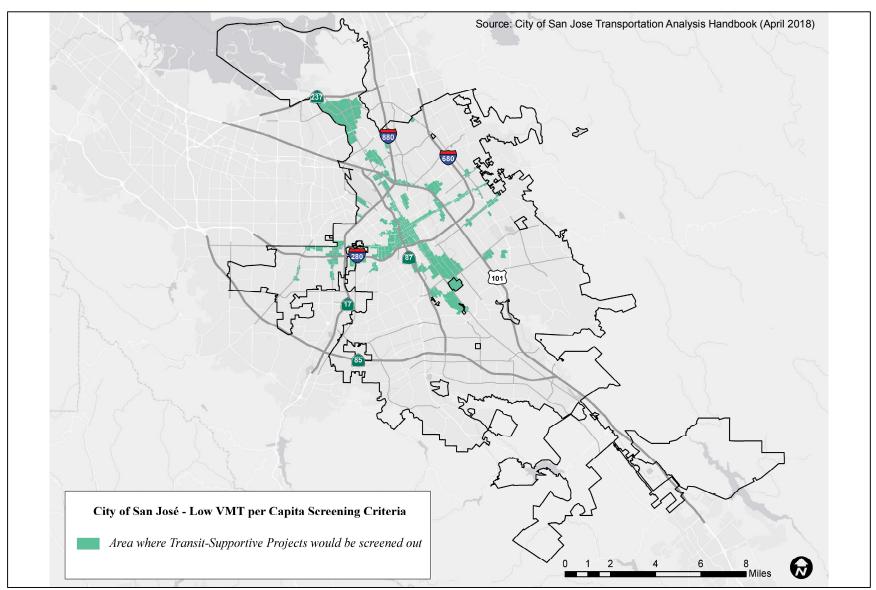




Figure 6 Low VMT per Job Areas in San Jose

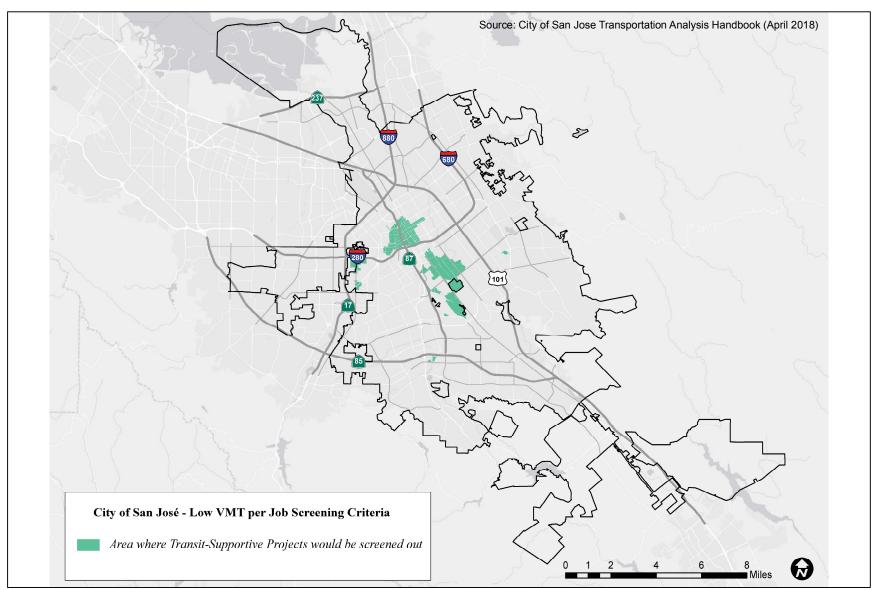




Table 1
CEQA VMT Analysis Screening Criteria for Development Projects

Туре	Screening Criteria
Small Infill Projects	<ul> <li>Single-family detached housing of 15 units or less; <u>OR</u></li> <li>Single-family attached or multi-family housing of 25 units or less; <u>OR</u></li> <li>Office of 10,000 square feet of gross floor area or less; <u>OR</u></li> <li>Industrial of 30,000 square feet of gross floor area or less</li> </ul>
Local-Serving Retail	• 100,000 square feet of total gross floor area or less without drive-through operations
Local-Serving Public Facilities	Local-serving public facilities
Residential/Office Projects or Components	<ul> <li>Planned Growth Areas: Located within a Planned Growth Area as defined in the Envision San José 2040 General Plan; AND</li> <li>High-Quality Transit: Located within ½ a mile of an existing major transit stop or an existing stop along a high-quality transit corridor; AND</li> <li>Low VMT: Located in an area in which the per capita VMT is less than or equal to the CEQA significance threshold for the land use; AND</li> <li>Transit-Supporting Project Density:         <ul> <li>Minimum Gross Floor Area Ratio (FAR) of 0.75 for office projects or components;</li> <li>Minimum of 35 units per acre for residential projects or components;</li> <li>If located in a Planned Growth Area that has a maximum density below 0.75 FAR or 35 units per acre, the maximum density allowed in the Planned Growth Area must be met; AND</li> </ul> </li> <li>Parking:         <ul> <li>No more than the minimum number of parking spaces required;</li> <li>If located in Urban Villages or Downtown, the number of parking spaces must be adjusted to the lowest amount allowed; however, if the parking is shared, publicly available, and/or "unbundled", the number of parking spaces can be up to the zoned minimum; AND</li> </ul> </li> <li>Active Transportation: Not negatively impact transit, bike or pedestrian infrastructure.</li> </ul>
Restricted Affordable Residential Projects or Components	<ul> <li>Affordability: 100% restricted affordable units, excluding unrestricted manager units; affordability must extend for a minimum of 55 years for rental homes or 45 years for for-sale homes; AND</li> <li>Planned Growth Areas: Located within a Planned Growth Area as defined in the Envision San José 2040 General Plan; AND</li> <li>High Quality Transit: Located within ½ a mile of an existing major transit stop or an existing stop along a high quality transit corridor; AND</li> <li>Transit-Supportive Project Density:         <ul> <li>Minimum of 35 units per acre for residential projects or components;</li> <li>If located in a Planned Growth Area that has a maximum density below 35 units per acre, the maximum density allowed in the Planned Growth Area must be met; AND</li> </ul> </li> <li>Transportation Demand Management (TDM): If located in an area in which the per capita VMT is higher than the CEQA significance threshold, a robust TDM plan must be included; AND</li> <li>Parking:         <ul> <li>No more than the minimum number of parking spaces required;</li> <li>If located in Urban Villages or Downtown, the number of parking spaces must be adjusted to the lowest amount allowed; however, if the parking is shared, publicly available, and/or "unbundled", the number of parking spaces can be up to the zoned minimum; AND</li> </ul> </li> <li>Active Transportation: Not negatively impact transit, bike or pedestrian infrastructure.</li> </ul>



The project site is located within a planned Growth Area (Southwest Expressway Urban Village) with low VMT per capita as identified by the City of San Jose. The proposed 1,780 s.f. of retail space is less than the 100,000 s.f. retail threshold screening criterion for local-serving retail. The residential component of the proposed project also will meet all of the applicable VMT screening criteria for affordable residential projects as described in further detail in Chapter 3. Therefore, both the residential and retail components of the proposed project are screened from the evaluation of VMT and is considered to result in a less-than significant VMT impact. However, a VMT evaluation for the project was completed using the *San José VMT Evaluation Tool* for informational purposes and is presented in Chapter 3.

# **Local Transportation Analysis Scope**

A local transportation analysis (LTA) supplements the CEQA VMT analysis and identifies transportation and traffic operational issues that may arise due to a development project. The LTA includes an evaluation of the effects of the project on transportation, access, circulation, and related safety elements in the proximate area of the project.

#### **Intersection Operations Analysis**

The evaluation of a project's impact on level of service at intersections under the jurisdiction of the City of San Jose is no longer required. Per Senate Bill (SB) 743 and the updated CEQA Guidelines. (Section 15064.3) Nov 2017, beginning July 1, 2020 the use of intersection level of service as a metric for determining impacts of development growth on the transportation system will no longer be permitted. However, since the VTA's Congestion Management Program (CMP) has yet to adopt and implement guidelines and standards for the evaluation of transportation impacts using VMT, the effects of the proposed project traffic on CMP-designated intersections and freeway segments in the vicinity of the project area were evaluated following the current peak-hour LOS standards and methodologies as outlined in the VTA Transportation Impact Analysis Guidelines. However, the determination of project impacts per CEQA requirements is based solely on the VMT analysis.

The LTA includes the evaluation of weekday AM and PM peak hour operations at a limited number of intersections for the purpose of identifying operational issues (queuing, signal operations, and potential multi-modal issues) at intersections in the general vicinity of the project site. However, the determination of project impacts per CEQA requirements is based solely on the VMT analysis.

Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most weekday traffic congestion occurs on the roadways in the study area.

Intersection operations conditions were evaluated for the following scenarios:

- **Existing Conditions**. Existing AM and PM peak hour traffic volumes at all study intersections were obtained from the City of San Jose and previously completed traffic studies.
- Background Conditions. Background traffic volumes were estimated by adding to existing peak
  hour volumes the projected volumes from approved but not yet completed developments. The
  approved project traffic was provided by the City of San Jose in the form of the Approved Trips
  Inventory (ATI).
- Background Plus Project Conditions. Background plus project conditions reflect projected
  traffic volumes on the planned roadway network with completion of the project and approved
  developments. Background traffic volumes with the project were estimated by adding to
  background traffic volumes the additional traffic generated by the project.



The LTA also includes a vehicle queuing analysis, an evaluation of potential project impacts on bicycle, pedestrian, and transit facilities, and a review of site access, on-site circulation, and parking demand.

# **Report Organization**

The remainder of this report is divided into four chapters. Chapter 2 describes existing transportation system including the existing roadway network, transit service, bicycle and pedestrian facilities. Chapter 3 describes the CEQA transportation analysis, including VMT analysis methodology, baseline and potential project VMT impacts, mitigation measures to reduce the VMT impact, and potential cumulative transportation impacts. Chapter 4 describes the LTA including the method by which project traffic is estimated, intersection operations analysis methodology, any adverse intersection traffic effects caused by the project, intersection vehicle queuing analysis, site access and on-site circulation review, effects on bicycle, pedestrian, and transit facilities, and parking. Chapter 5 presents the conclusions of the transportation analysis.



# 2. Existing Transportation Setting

This chapter describes the existing conditions of the transportation system within the study area of the project. It describes transportation facilities in the vicinity of the project site, including the roadway network, transit services, and pedestrian and bicycle facilities.

# **Existing Roadway Network**

Regional access to the project site is provided via I-880 and I-280. These facilities are described below.

*I-880/SR-17* is a six-lane freeway in the vicinity of the site. It extends north to Oakland and south to I-280 in San Jose, at which point it makes a transition into SR 17 to Santa Cruz. Access to the site is provided via its interchange with I-280 and ramps at Hamilton Avenue.

*I-280* is an eight-lane freeway in the vicinity of the site. It extends northwest to San Francisco and east to King Road in San Jose, at which point it makes a transition into I-680 to Oakland. North of I-880, I-280 has high occupancy vehicle (HOV) lanes in both directions. Access to and from southbound I-280 to the site is provided via its interchange at Meridian Avenue. Access to northbound I-280 is also provided via Meridian Avenue. Access from northbound I-280 is available via ramps on Race Street and via Southwest Expressway.

Local access to the site is provided by Meridian Avenue, Race Street, Fruitdale Avenue, Southwest Expressway, Curci Drive, and Willow Drive. These roadways are described below.

**Meridian Avenue** is generally a four-lane north-south arterial that runs northward from Camden Avenue to Park Avenue. The roadway narrows to two lanes between San Carlos Street and Park Avenue. South of Fruitdale Avenue, a two-way left-turn lane is provided along Meridian Avenue, including along the east project frontage. In the vicinity of the project site and south of Fruitdale Avenue, sidewalks are provided on both sides of the roadway. Bike lanes are not provided. The posted speed limit is 35 mph. Meridian Avenue runs along the east project frontage and provides direct access to the project site via one full-access project driveway.

**Race Street** is a north-south roadway that runs northward from Fruitdale Avenue to The Alameda. It is a four-lane road between Saddle Rack Street and the I-280 off-ramp and a two-lane road north of Saddle Rack Street and south of the I-280 off-ramp. Bike lanes are provided along both sides of Race Street, between The Alameda and Park Avenue and between San Carlos Street and Parkmoor Avenue. Access to the project site from Race Street is provided via Meridian Avenue and Fruitdale Avenue.

**Fruitdale Avenue** is a four-lane east-west roadway that runs between Meridian Avenue westward to Bascom Avenue, where it transitions to Enborg Lane. East of Meridian Avenue, Fruitdale Avenue is a



two-lane roadway. Sidewalks are generally provided along both sides of Fruitdale Avenue. Bike lanes are not provided. Access to the project site from Fruitdale Avenue is provided via Meridian Avenue.

**Southwest Expressway** is a four-lane divided roadway that runs between I-280 southward to Bascom Avenue. Sidewalks and bike lanes are provided along both sides of Southwest Expressway. The VTA's Mountain View-Winchester Light Rail Transit (LRT) line runs along the north side of Southwest Expressway between Fruitdale Avenue and Bascom Avenue. The posted speed limit is 40 mph. Access to the project site from Southwest Expressway is provided via Fruitdale Avenue and Meridian Avenue.

**Curci Drive** is a two-lane east-west roadway that runs between Meridian Avenue westward to St. Elizabeth Drive. Sidewalks and on-street parking a provided along both sides of Curci Drive. Bike lanes are not provided. Access to the project site is provided via Meridian Avenue.

**Willow Drive** is a two-lane east-west roadway that runs between Blackford Elementary School eastward to First Street. In the vicinity of the project site, sidewalks and on-street parking are provided along both sides of Willow Drive. Bike lanes are provided between Santa Lucia Drive and Harliss Avenue. Access to the project site is provided via Meridian Avenue.

# **Existing Pedestrian, Bicycle and Transit Facilities**

San Jose desires to provide a safe, efficient, fiscally, economically, and environmentally-sensitive transportation system that balances the need of bicyclists, pedestrians, and public transit riders with those of automobiles and trucks. The existing bicycle, pedestrian, and transit facilities in the study area are described below.

#### **Existing Pedestrian Facilities**

Pedestrian facilities near the project site consist mostly of sidewalks along the streets in the study area. Sidewalks are found along both sides of all streets near the project site including Meridian Avenue (south of Fruitdale Avenue), Fruitdale Avenue, and Curci Drive. Other pedestrian facilities in the project area include crosswalks and pedestrian push buttons at all signalized study intersections. Crosswalks are provided along the south and west approaches at the intersection of Meridian Avenue and Curci Drive. However, the curb ramps located at its northwest and southeast corners are not ADA compatible.

Pedestrian generators in the project vicinity include the Fruitdale LRT Station, commercial and office plazas in the vicinity of the Meridian Avenue/Willow Street intersection, and bus stops along the Meridian Avenue and Fruitdale Avenue corridors. The project site is within the service boundaries of Blackford Elementary School and Monroe Middle School which are part of the Campbell Union School District. Blackford Elementary School is located approximately 0.85-mile south of the project site along Willow Street while Monroe Middle School is located approximately two miles west of the project site near Williams Road and Monroe Street.

Existing sidewalks along Meridian Avenue, Fruitdale Avenue, and Willow Street provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity, including the Fruitdale LRT Station and Blackford Elementary School. Pedestrian access across SR-17 is provided via a pedestrian footbridge connecting Westfield Avenue and Downing Avenue. Although no sidewalks are provided along Meridian Avenue between Fruitdale Avenue and Parkmoor Avenue, a footbridge across I-280 is provided west of Meridian Avenue between Parkmoor Avenue and Moorpark Avenue. Sidewalks along Race Street may also be used to cross the I-280 corridor.

Overall, the existing network of sidewalks and crosswalks provides good connectivity and provides pedestrians with safe routes to transit services and other points of interest in the area.



#### **Existing Bicycle Facilities**

Class I Bikeway (Bike Path). Class I bikeways are bike paths that are physically separated from motor vehicles and offer two-way bicycle travel on a separate path. The Los Gatos Creek Trail is located in the project area and is a continuous multi-purpose pathway for pedestrians and bicycles that is separated from motor vehicles. The southern segment begins at Vasona Lake County Park in the south and continues to Meridian Avenue in the north, all alongside Los Gatos Creek. Access to the southern segment from the project site is provided approximately 225 feet south of the intersection of Meridian Avenue and Curci Drive. The northern segment begins at Lonus Street, east of Lincoln Avenue, and ends at Dupont Street, south of San Carlos Street. A connection to the northern segment of the Los Gatos Creek Trail system is located on Lonus Street approximately one mile north and east of the project site. Additionally, the Three Creeks Trail runs between Coe Avenue and Minnesota Avenue. The nearest trailhead is located at Coe Avenue, east of Leona Court, approximately one mile east of the project site.

**Class II Bikeway (Bike Lane)**. Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings. Within the vicinity of the project site, striped bike lanes are present on the following roadway segments.

- Southwest Expressway, between Fruitdale Avenue and Bascom Avenue
- Parkmoor Avenue, between Meridian Avenue and Race Street
- Race Street, between Parkmoor Avenue and San Carlos Street
- Lincoln Avenue, between San Carlos Street and Minnesota Avenue
- Willow Street, between Blackford Elementary School and Harliss Avenue
- Minnesota Avenue, between Weaver Drive and Lelong Street

Class III Bikeway (Bike Route). Class III bikeways are bike routes and only have signs to help guide bicyclists on recommended routes to certain locations. In the vicinity of the project site, the following roadway segments are designated as bike routes.

- St. Elizabeth Drive/Stokes Street, between Fruitdale Avenue and Bascom Avenue
- Minnesota Avenue, between Meridian Avenue and Weaver Drive
- Glen Eyrie Avenue, between Willow Street and Lincoln Avenue

The existing bicycle facilities are shown in Figure 7.

## **Existing Transit Services**

Existing transit services in the study area are provided by the VTA and are shown on Figure 8. The project site is primarily served by three VTA bus routes: Frequent Bus Route 25, Local Bus Route 64B, and Express Bus Route 103. These bus lines are listed in Table 2, including their terminus points, hours of operation, and commute hour headways. The nearest bus stops to the project site are located along Meridian Avenue, near Curci Drive approximately 350 feet from the project site and Fruitdale Avenue, approximately 500 feet from the project site and are served by Routes 25 and 64B. Additionally, the Fruitdale LRT Station is located within 1/3 of a mile from the project site at the southwest corner of the intersection of Southwest Expressway and Fruitdale Avenue. LRT service at the Fruitdale LRT Station is provided by the Mountain View-Winchester LRT line, which operates nearly 24 hours a day (4:40 AM to 12:45 AM) with 15-minute headways during peak commute and midday hours. The Mountain View-Winchester LRT line provides access to the Diridon Transit Center, located approximately two miles north of the project site. Connections between local and regional bus routes, light rail lines, and commuter rail lines are provided within the Diridon Transit Center.



Figure 7
Existing Bicycle Facilities

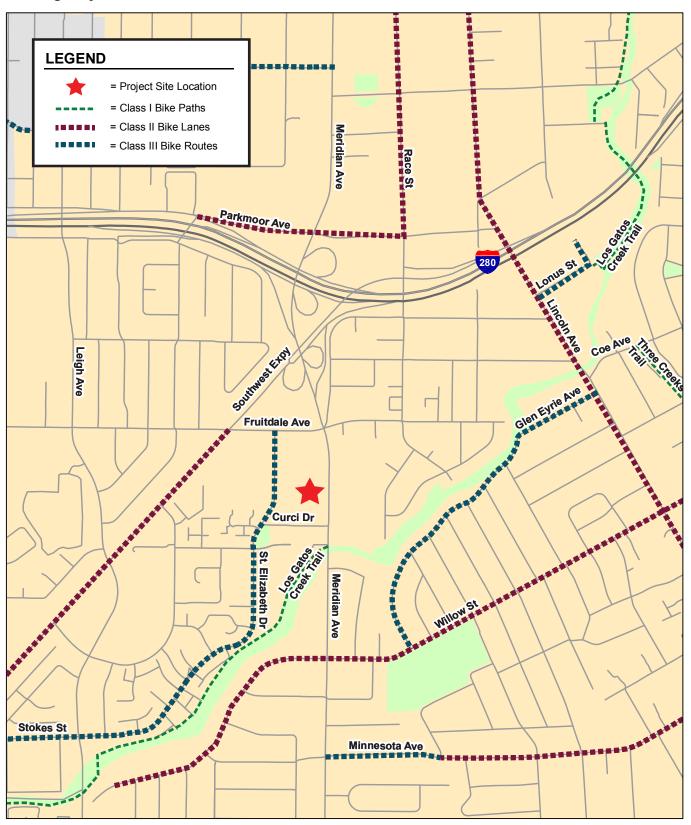




Figure 8
Existing Transit Services





Table 2 Existing Transit Services

Bus Route	Route Description	Hours of Operation	Headway <sup>1</sup>
Frequent Route 25	De Anza College to Alum Rock Transit Center via Valley Medical Center	5:12 AM - 12:33 AM	12 min
Local Route 64B	McKee & White to Almaden Expressway & Camden	5:55 AM - 9:34 PM	25-30 min
Express Route 103	Eastridge Transit Center to Palo Alto	5:05 AM - 8:30 AM; 2:41 PM - 6:46 PM	30-40 min
Notes:  1 Approximate headwa	ys during peak commute periods.		



# 3. **CEQA Transportation Analysis**

This chapter describes the CEQA transportation analysis, including the VMT analysis methodology and significance criteria, potential project impacts on VMT, mitigation measures recommended to reduce significant impacts, and cumulative transportation impacts.

# **CEQA Transportation Analysis Exemption Criteria**

The City of San Jose *Transportation Analysis Handbook* identifies screening criteria that determines whether a CEQA transportation analysis would be required for development projects. The criteria are based on the type of project, characteristics, and/or location. If a project meets the City's screening criteria, the project is expected to result in less-than-significant VMT impacts and a detailed CEQA VMT analysis is not required.

# **Evaluation of Screening Criteria**

The project site is located within a planned Growth Area (proposed Southwest Expressway Urban Village) with low VMT per capita as identified by the City of San Jose (see Figure 9).

The residential component of the proposed project will meet all of the applicable VMT screening criteria for affordable residential projects as described below. Per the City of San Jose VMT screening criteria, retail projects of 100,000 square feet or less (without drive-thru operations) are considered local-serving and are screened from CEQA VMT evaluation. The proposed 1,780 s.f. of retail space is less than the 100,000 s.f. retail threshold screening criterion for local-serving retail and a detailed VMT analysis is not required.

Therefore, both the residential and retail components of the proposed project are screened from the evaluation of VMT and the project is considered to result in a less-than significant VMT impact. However, a VMT evaluation for the project was completed using the *San José VMT Evaluation Tool* for informational purposes.

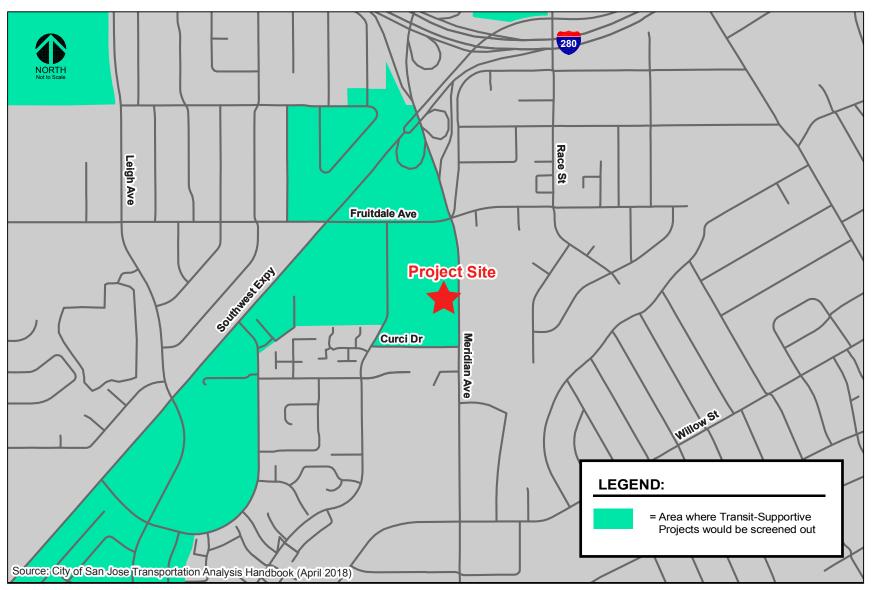
# Affordability

**Requirement:** 100% restricted affordable units, excluding unrestricted manager units; affordability must extend for a minimum of 55 years for rental homes or 45 years for for-sale homes

The project proposes 100% restricted affordable units.



Figure 9
Low VMT per Capita Areas (Affordable Housing)





#### **Planned Growth Areas**

**Requirement:** Located within a Planned Growth Area as defined in the Envision San José 2040 General Plan.

The project site is located within the proposed Southwest Expressway Urban Village, per the General Plan. It should be noted that the City has not yet adopted a plan for the Southwest Expressway Urban Village.

## **High-Quality Transit**

**Requirement:** Located within ½ a mile of an existing major transit stop or an existing stop along a high-quality transit corridor

The project site is located approximately 1/3 of a mile from the Fruitdale LRT Station near the intersection of Southwest Expressway and Fruitdale Avenue. Fruitdale LRT Station is a major transit stop providing access to light rail transit service provided by VTA.

### **Transit-Supporting Project Density**

**Requirement:** Minimum of 35 units per acre for residential projects or components; if located in a Planned Growth Area that has a maximum density below 35 units per acre, the maximum density allowed in the Planned Growth Area must be met.

A total of 233 units are proposed to be constructed on the 2.09-acre project site. The proposed development density will equate to 111 units per acre, exceeding the required minimum of 35 units per acre.

## **Transportation Demand Management (TDM)**

**Requirement:** If located in an area in which the per capita VMT is higher than the CEQA significance threshold, a robust TDM plan must be included.

The results of the VMT evaluation, using the City's VMT Evaluation Tool, indicate that the existing VMT for residential uses in the project vicinity is 8.85 per capita which is below the established VMT impact threshold of 10.12. The proposed project is projected to generate VMT per capita (7.97) which will continue to be below the established VMT impact threshold. Therefore, a TDM plan will not be required for the purpose of meeting the VMT screening criteria requirements.

#### **Parking**

**Requirement:** No more than the minimum number of parking spaces required; if located in Urban Villages or Downtown, the number of parking spaces must be adjusted to the lowest amount allowed; however, if the parking is shared, publicly available, and/or "unbundled", the number of parking spaces can be up to the zoned minimum.

The site is within the proposed Southwest Expressway Urban Village, which is subject to city-wide parking rates. The project proposes a total of 290 parking spaces on-site which does not exceed the required 319 spaces as calculated per the City code and Urban Village reduction.

#### **Active Transportation**

Requirement: Not negatively impact transit, bike or pedestrian infrastructure



No negative impacts to transit, bike or pedestrian infrastructure are anticipated with the proposed development. Potential impacts to transit services, bike and pedestrian facilities within the project study area are discussed in Chapter 3.

# **VMT Analysis Methodology**

Per Council Policy 5-1, the effects of the proposed project on VMT was evaluated using the methodology outlined in the City's *Transportation Analysis Handbook*. VMT is the total miles of travel by personal motorized vehicles a project is expected to generate in a day. VMT measures the full distance of personal motorized vehicle-trips with one end within the project. Because the proposed project is relatively small and would not significantly alter existing traffic patterns, the VMT evaluation tool is used to estimate the project VMT and determine whether the project would result in a significant VMT impact. Figure 10 shows the current VMT levels estimated by the City's TDF model for residents in the immediate project area.

The evaluation tool evaluates a list of selected VMT reduction measures that can be applied to a project to reduce the project VMT. There are four strategy tiers whose effects on VMT can be calculated with the evaluation tool:

- 1. Project characteristics (e.g. density, diversity of uses, design, and affordability of housing) that encourage walking, biking and transit uses.
- 2. Multimodal network improvements that increase accessibility for transit users, bicyclists, and pedestrians,
- 3. Parking measures that discourage personal motorized vehicle-trips, and
- 4. Transportation demand management (TDM) measures that provide incentives and services to encourage alternatives to personal motorized vehicle-trips.

The first three strategies – land use characteristics, multimodal network improvements, and parking – are physical design strategies that can be incorporated into the project design. TDM includes programmatic measures that aim to reduce VMT by decreasing personal motorized vehicle mode share and by encouraging more walking, biking, and riding transit. TDM measures should be enforced through annual trip monitoring to assess the project's status in meeting the VMT reduction goals.

#### Thresholds of Significance

If a project is found to have a significant impact on VMT, the impact must be reduced by modifying the project to reduce its VMT to an acceptable level (below the established thresholds of significance applicable to the project) and/or mitigating the impact through multimodal transportation improvements or establishing a Trip Cap.

Table 3 shows the VMT thresholds of significance for development projects, as established in the Transportation Analysis Policy.

The proposed project consists mainly of a residential development with complementary commercial land use (retail use). However, it is anticipated that the commercial use component of the proposed project would be local-serving and would not generate sufficient traffic to have an effect on the existing VMT in the project area. Therefore, VMT analysis was completed for only the proposed residential component of the project.



Figure 10 VMT per Capita Heat Map in Project Area





Table 3
CEQA VMT Analysis Significant Impact Criteria for Development Projects

Туре	Significance Criteria	Current Level	Threshold	
Residential Uses	Project VMT per capita exceeds existing citywide average VMT per capita minus 15 percent <u>OR</u> existing regional average VMT per capita minus 15 percent, whichever is lower.	11.91 VMT per capita (Citywide Average)	10.12 VMT per capita	
General Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee minus 15 percent	14.37 VMT per employee (Regional Average)	12.21 VMT per employee	
Industrial Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee	14.37 VMT per employee (Regional Average)	14.37 VMT per employee	
Retail/ Hotel/ School Uses	Net increase in existing regional total VMT	Regional Total VMT	Net Increase	
Public/Quasi-Public Uses	In accordance with the most appropriate type(s) as determined by Public Works Director	Appropriate levels listed above	Appropriate thresholds listed above	
Mixed Uses	Evaluate each land use component of a mixed-use project independently, and apply the threshold of significance for each land use type included	Appropriate levels listed above	Appropriate thresholds listed above	
Change of Use or Additions to Existing Development	Evaluate the full site with the change of use or additions to existing development, and apply the threshold of significance for each project type included	Appropriate levels listed above	Appropriate thresholds listed above	
Area Plans	Evaluate each land use component of the area plan independently, and apply the threshold of significance for each land use type included	Appropriate levels listed above	Appropriate thresholds listed above	
Source: City of San José Transportation Analysis Handbook, April 2018.				



Projects that include residential uses are said to create a significant adverse impact when the estimated project-generated VMT exceeds the existing citywide average VMT per capita minus 15 percent or existing regional average VMT per capita minus 15 percent, whichever is lower. Currently, the reported citywide average is 11.94 VMT per capita, which is less than the regional average. Therefore, a significant impact threshold of 10.12 VMT per capita is currently used for residential uses.

Projects that trigger a VMT impact can assess a variety of the four strategies described above to reduce impacts. A significant impact is said to be satisfactorily mitigated when the strategies and VMT reductions implemented render the VMT impact less than significant.

# **VMT** of Existing Land Uses

The results of the VMT analysis using the VMT evaluation tool indicate that the existing VMT for residential uses in the project vicinity is 8.85 per capita. As shown in Table 3, the current citywide average VMT for residential uses is 11.91 per capita. Therefore, the VMT levels of existing uses in the project vicinity are currently less than the average VMT levels. Appendix A presents the VMT evaluation tool summary report for the project.

# **Project-Level VMT Impact Analysis**

The City's Transportation Policy identifies an impact threshold of 15% below the citywide average percapita VMT of 11.91. Thus, the proposed project would result in a significant impact if it results in VMT that exceeds per capita VMT of 10.12.

The results of the VMT evaluation, using the City's VMT Evaluation Tool, indicate that the proposed project is projected to generate VMT per capita (7.97) which is less than the existing VMT per capita in the project area and below the established VMT impact threshold.

The reduction in per-capita VMT could be indicative of the addition of residents to an area with extensive opportunities for the use of transit, bicycles, and other non-auto modes of travel. In addition, the project site is located within 1/3 mile of an LRT station and is supported by major bus stops, bicycle and pedestrian facilities in its immediate proximity. Therefore, a larger percentage of the residents of the project would likely use transit more regularly than the average transit usage for these land uses in Santa Clara County. The increase in transit usage would result in a reduction of the number of vehicular trips that will be added to the roadway system due to the proposed project.

Figure 11 shows the VMT evaluation summary generated by the City of San Jose's VMT Evaluation Tool.

# **Cumulative (GP Consistency) Evaluation**

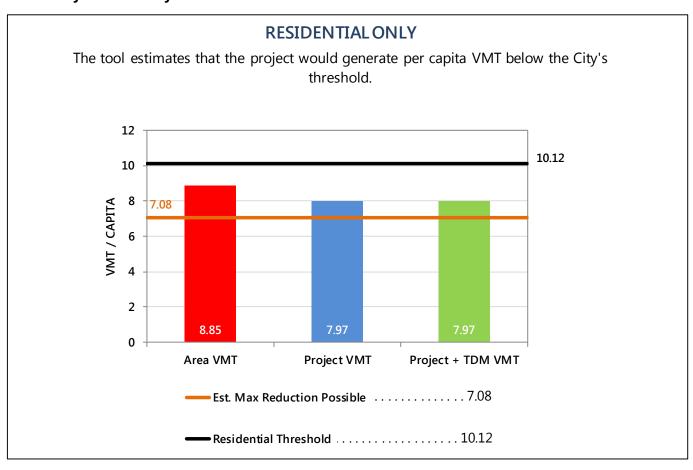
Projects must demonstrate consistency with the *Envision San José 2040 General Plan* to address cumulative impacts. Consistency with the City's General Plan is based on the project's density, design, and conformance to the General Plan goals and policies. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required per the City's *Transportation Analysis Handbook*.

The proposed project will be consistent with General Plan policy TR-3.3 that states:

• As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute



Figure 11 VMT Analysis Summary



towards transit ridership. In addition, require that new development is designed to accommodate and to provide direct access to transit facilities.

The project is consistent with the General Plan goals and policies for the following reasons:

- The project site is adjacent to bus stops on Meridian Avenue.
- The project site is in close proximity to the Fruitdale LRT station that is located within 1/3 of a
  mile from the project site at the southwest corner of the intersection of Southwest Expressway
  and Fruitdale Avenue. The Mountain View-Winchester LRT line provides access to the Diridon
  Transit Center, located approximately two miles north of the project site. Connections between
  local and regional bus routes, light rail lines, and commuter rail lines are provided within the
  Diridon Transit Center.
- The project frontage along Meridian Avenue will be designed to be consistent with planned streetscape design features of Grand Boulevards, such as wider sidewalks.

Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be considered as part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.



# 4.

# **Local Transportation Analysis**

This chapter describes the local transportation analysis including the method by which project traffic is estimated, intersection operations analysis for existing, background, and background plus project scenarios, any adverse effects on study intersections caused by the project, intersection vehicle queuing analysis, freeway segment capacity, freeway ramp analysis, site access and on-site circulation review, effects on bicycle, pedestrian, and transit facilities, and parking.

# **Project Description**

As proposed, the project would demolish two vacant single-family homes on-site and construct a building consisting of 233 affordable residential units and approximately 1,780 square feet of retail space. The project proposes one level of below-grade parking and one level of above-grade parking which would provide 290 parking spaces. A full-access driveway is proposed along the southern edge of the site on Meridian Avenue and would serve as the primary driveway. A secondary truck access driveway would be located along the northern edge of the site.

The project site is located within a proposed Urban Village (Southwest Expressway) per the Envision San Jose 2040 General Plan. Urban villages are walkable, bicycle-friendly, transit-oriented, mixed-use settings that provide both housing and jobs, thus supporting the General Plan's environmental goals.

# **Project Trip Estimates**

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel are estimated. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below.

# **Trip Generation**

#### **Proposed Project Trips**

Through empirical research, data have been collected that indicate the amount of traffic that can be expected to be generated by common land uses. Project trip generation was estimated by applying to the size and uses of the development the appropriate trip generation rates. The average trip generation rates for Multi-Family Housing – Mid Rise (Land Use 221) and Shopping Center (Land Use 820) as published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10<sup>th</sup> Edition (2017) were applied to the proposed number of residential units and commercial square footage, respectively.



### **Trip Reductions**

In accordance with San Jose's *Transportation Analysis Handbook* (April 2018, Section 4.8, "Intersection Operations Analysis"), the project is eligible for adjustments and reductions from the baseline (gross) trip generation described above.

A mixed-use development with complementary land uses such as residential and retail, will result in a reduction of external site trips. Thus, the number of vehicle trips generated for each use may be reduced, since a portion of the trips would not require entering or exiting the site. Therefore, based on VTA's recommended mixed-use reduction, a 15 percent trip reduction is applied for the housing/retail mixed use, based on the smaller retail component. The reduction is applied to the smaller of the two complimentary trip generators and the same number of trips is then subtracted from the larger trip generator.

Based on the 2018 San Jose guidelines, the project qualifies for a location-based adjustment. The location-based adjustment reflects the project's vehicle mode share based on the place type in which the project is located per the San Jose Travel Demand Model. The project's place type was obtained from the San Jose VMT Evaluation Tool. Based on the Tool, the project site is located within a suburban area with multifamily housing. Therefore, the baseline project trips were adjusted to reflect a suburban mode share. A suburban area with multifamily housing is characterized as an area with average accessibility and vacancy, and low single-family housing stock. Residential developments within suburban areas with multifamily housing have a vehicle mode share of 88%. Thus, a 12% reduction was applied to the residential trips estimated to be generated by the proposed project.

Additionally, based on the San Jose VMT Evaluation Tool (Appendix A), the project is anticipated to generate 7.97 VMT per-capita in an area that currently generates approximately 8.85 VMT per-capita. It is assumed that every percent reduction from the existing per-capita VMT is equivalent to one percent reduction in peak-hour vehicle trips. Thus, the project trip estimates were reduced by 10 percent to reflect the reduction in peak hour trips.

### **Total Project Trips**

After applying the ITE trip rates and appropriate trip reductions, it is estimated that the project would generate an additional 1,044 daily vehicle trips, with 69 trips (18 inbound and 51 outbound) occurring during the AM peak hour and 88 trips (53 inbound and 35 outbound) occurring during the PM peak hour. The project trip generation estimates are presented in Table 4.

### **Trip Distribution and Trip Assignment**

The trip distribution pattern for the project was developed based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak-hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern, with an emphasis on freeway access and project driveway location. Figure 12 shows the trip distribution pattern, and Figure 13 shows the trip assignment of project traffic on the local transportation network.



Table 4
Project Trip Generation Estimates

												AM Pe	ak Hou	7			PM Pea	ak Hou	r	
	ITE Land		% of Vehicle	VIV	IT <sup>3</sup>	%		Da	ily	Pk-Hr	S	plit		Trip		Pk-Hr	Split		Trip	
Land Use	Use Code	Location	Mode Share	Existing	Project	Reduction	Size	Rate	Trip	Rate	In	Out	In	Out	Total	Rate	In Out	In	Out	Total
Proposed Land Uses																				
Multifamily Housing (Mid-Rise) <sup>1</sup>	221						233 Dwelling Units	5.44	1,268	0.360	26%	74%	22	62	84	0.44	61% 39%	63	40	103
- Residential - Retail Internal Redu	ıction <sup>2</sup>								-10				0	0	0			-1	0	-1
- Location Based Reduction 3		Suburb with	88%			12%			-152				-3	-7	-10			-7	-5	-12
- VMT Reduction 4		Multifamily Housing		8.85	7.97	10%			-110				-2	-5	-7			-5	-3	-8
Shopping Center <sup>1</sup>	820						1,780 Square Feet	37.75	67	0.940	62%	38%	1	1	2	3.81	48% 52%	3	4	7
- Residential - Retail Internal Redu	ıction <sup>2</sup>	Suburb with				15%			-10				0	0	0			0	-1	-1
- Location Based Reduction 3		Multifamily Housing	88%			12%			-8				0	0	0			0	0	0
Total Project Trips									1.044				18	51	69			53	35	88

#### Notes:

It is assumed that every percent reduction in VMT per-capita is equivalent to one percent reduction in peak-hour vehicle trips.



<sup>&</sup>lt;sup>1</sup> Source: ITE *Trip Generation Manual*, 10th Edition 2017, average trip generation rates.

<sup>&</sup>lt;sup>2</sup> As prescribed by the Transportation Impact Analysis Guidelines from VTA (October 2014), the maximum trip reduction for a mixed-use development project with residential and retail is equal to 15% off the smaller trip generator.

<sup>&</sup>lt;sup>3</sup> The project site is located within an suburb with multifamily housing based on the City of San Jose VMT Evaluation Tool (February 29, 2019). The location-based vehicle mode shares are obtained from Table 6 of the City of San Jose Transportation Analysis Handbook (April 2018). The trip reductions are based on the percent of mode share for all of the other modes of travel besides vehicle.

<sup>&</sup>lt;sup>4</sup> VMT per capita for residential use. Existing and project VMTs were estimated using the City of San Jose VMT Evaluation Tool.

Figure 12 Project Trip Distribution

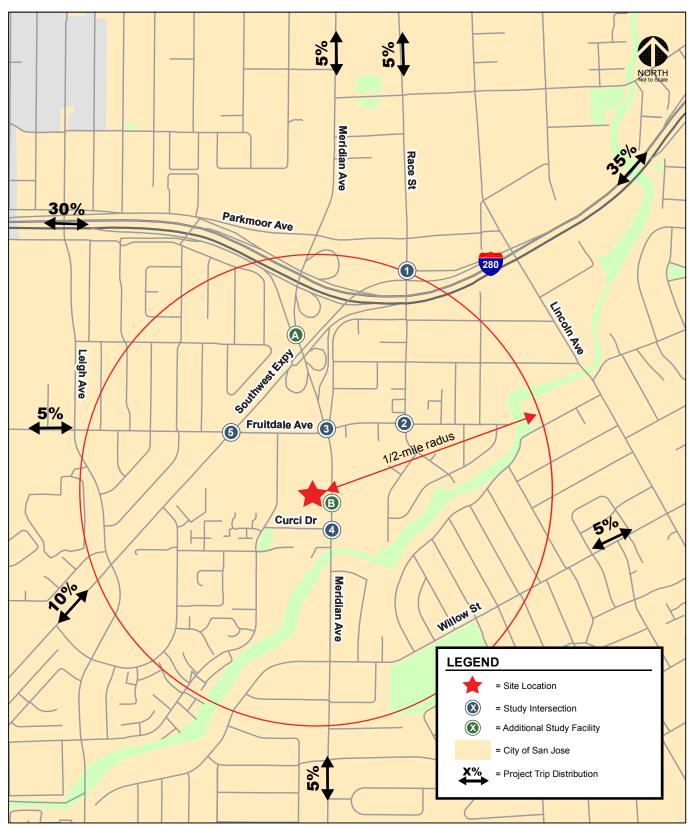
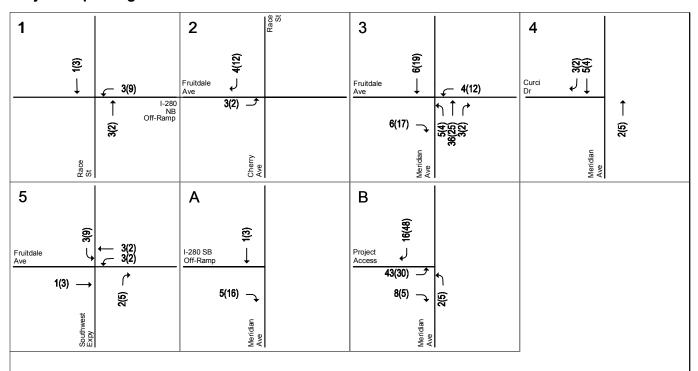




Figure 13 Project Trip Assignment





# **Intersection Operations Methodology**

This section presents the methods used to evaluate traffic operations at the study intersections. It includes descriptions of the data requirements, the analysis methodologies, the applicable level of service standards, and the criteria defining adverse effects at the study intersections.

The intersection operations analysis is intended to quantify the operations of intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect on a study intersection is not considered a CEQA impact metric.

## **Study Intersections**

The study includes an analysis of AM and PM peak-hour traffic conditions for three signalized intersections and two unsignalized intersections within the City of San Jose. Intersections were selected for study if the project is expected to add 10 vehicle trips per hour per lane to a signalized intersection that meets one of the following criteria as outlined in the *Transportation Analysis Handbook*.

- Within a ½-mile buffer from the project's property line;
- Outside a ½-mile buffer but within a one-mile buffer from the project AND currently operating at D or worse;
- Designated Congestion Management Program (CMP) facility outside of the City's Infill Opportunity Zones;
- Outside the City limits with the potential to be affected by the project, per the transportation standards of the corresponding external jurisdiction;
- With the potential to be affected by the project, per engineering judgement of Public Works.

Based on the above criteria, the following City of San Jose study intersections were selected and are shown in Figure 12.

- 1. Race Street and I-280 NB Off-Ramp (unsignalized)
- 2. Race Street/Cherry Avenue and Fruitdale Avenue (unsignalized)
- 3. Meridian Avenue and Fruitdale Avenue
- 4. Meridian Avenue and Curci Drive
- 5. Southwest Expressway and Fruitdale Avenue

Additionally, the I-280 Southbound Off-Ramp onto southbound Meridian Avenue (an uncontrolled freeway off-ramp) was evaluated to identify the effect of the addition of project traffic on the operations of the freeway off-ramp. It should be noted that the City has not adopted methodologies or impact criteria for the analysis of freeway ramps.

### **Data Requirements**

The data required for the analysis were obtained from new traffic counts, the City of San Jose, and field observations. The following data were collected from these sources:

- existing traffic volumes
- existing lane configurations
- signal timing and phasing
- approved project trips



Figure 14 Existing Lane Configurations

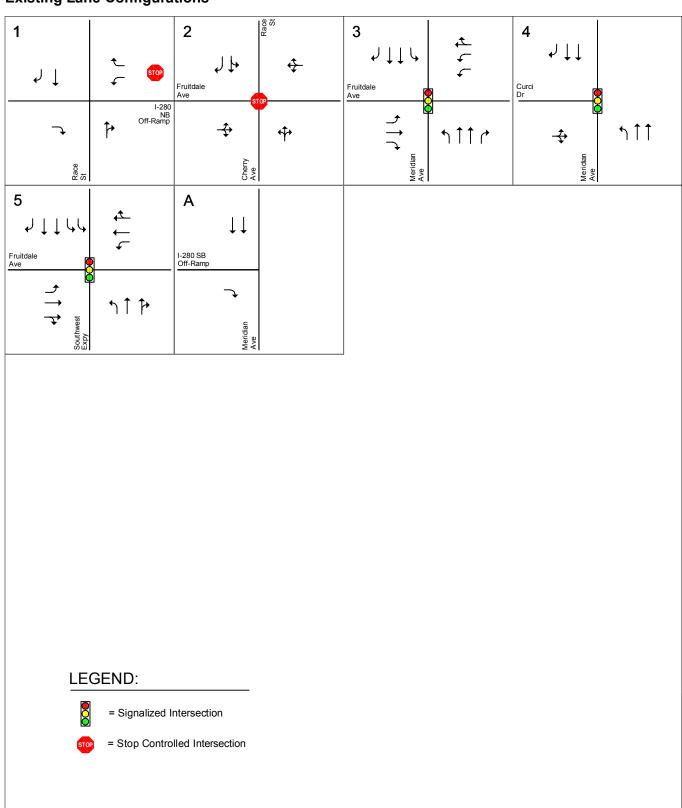




Figure 15 Existing Traffic Volumes

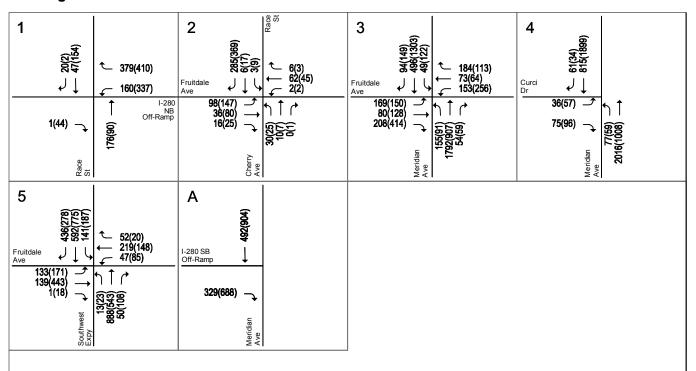




Figure 16
Background Traffic Volumes

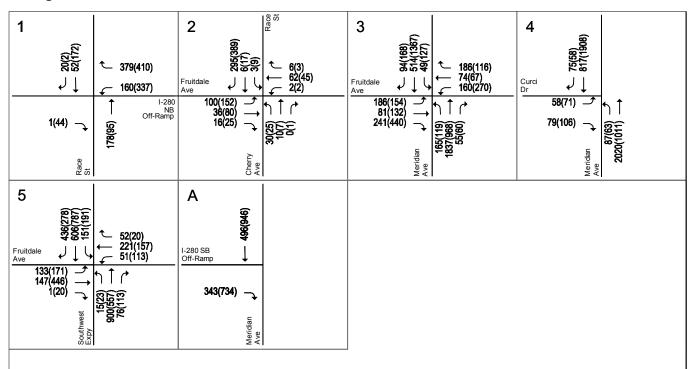




Figure 17
Background Plus Project Traffic Volumes

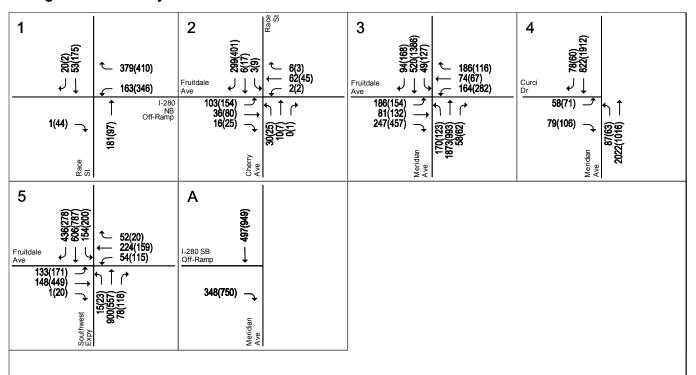




Table 5
Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay per Vehicle (sec.)
А	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	up to 10.0
В	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
С	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0
	ransportation Research Board, 2000 Highway Capacity Manual. Tra uidelines, Santa Clara County Transportation Authority Congestion	

The level of service at the intersection degrades from an acceptable level (LOS D or better) under background conditions to an unacceptable level under background plus project conditions, or

2. The level of service at the intersection is an unacceptable level (LOS E or F) under background conditions and the addition of project trips cause both the critical-movement delay at the intersection to increase by four or more seconds *and* the volume-to-capacity ratio (V/C) to increase by one percent (.01) or more.

The exception to this threshold is when the addition of project traffic reduces the amount of average control delay for critical movements, i.e., the change in average control delay for critical movements are negative. In this case, the threshold is when the project increases the critical v/c value by 0.01 or more.

### **Unsignalized Intersections**

The study includes the analysis of two unsignalized intersections. The City of San Jose does not have a level of service standard for unsignalized intersections. The unsignalized study intersections were analyzed for operational purposes only.

The evaluation of the stop-controlled intersections of Race Street/I-280 Northbound Off-Ramp and Race Street/Fruitdale Avenue is based on the Peak-Hour Volume Signal Warrant, (Warrant #3 – Part B)



described in the California *Manual on Uniform Traffic Control Devices* (MUTCD), 2014 Edition. This method makes no evaluation of intersection level of service, but simply provides an indication of whether peak-hour traffic volumes are, or would be, sufficient to justify installation of a traffic signal. Intersections that meet the peak hour warrant are subject to further analysis before determining that a traffic signal is necessary.

### **Improvement Measures**

An adverse intersection operations effect by City of San Jose standards may be addressed by implementing measures that would restore intersection level of service to background conditions or better. The City recommends prioritizing improvements related to alternative transportation modes, parking measures, and/or TDM measures. Improvements that increase vehicle capacity are secondary and must not have unacceptable effects on existing or planned transportation facilities. Unacceptable effects on existing or planned transportation facilities include the following:

- Inconsistent with the General Plan Transportation Network and Street Typologies;
- Reduction of any physical dimension of a transportation facility below the minimum design standards per the San José Complete Streets Design Standards and Guidelines; OR
- Substantial deterioration in the quality of existing or planned transportation facilities, including pedestrian, bicycle, and transit systems and facilities, as determined by the Director of Transportation.

# **Intersection Operations Analysis Results**

The intersection level of service analysis is summarized in Table 6.

### **Existing Intersection Operation Conditions**

Intersection levels of service were evaluated against applicable City of San Jose operations standards. The results of the level of service analysis show all signalized study intersections currently operate at an acceptable LOS D or better during both the AM and PM peak hours, based on the City of San Jose intersection operations standard of LOS D. The level of service calculation sheets are included in Appendix E.

The unsignalized study intersections of Race Street/I-280 Northbound Off-Ramp and Race Street/Fruitdale Avenue were analyzed for operational purposes, based on the Peak-Hour Volume Signal Warrant, (Warrant #3 – Part B) described in the California *Manual on Uniform Traffic Control Devices* (MUTCD), 2014 Edition. The results of the peak-hour traffic signal warrant checks indicate that the unsignalized study intersections currently have traffic volumes that fall below the thresholds that warrant signalization under existing conditions. The peak-hour signal warrant sheets are contained in Appendix G.

### **Observed Existing Traffic Conditions**

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to intersection level of service, and (2) to identify any locations where the level of service calculation does not accurately reflect level of service in the field.

Field observations revealed the following operational problems that may not be reflected in level of service calculations:



Table 6
Intersection Level of Service Results

					Exist	ing	Backgr	ound	Ва	ckgro	ound Plus P	roject
Int.		LOS	Peak	Count	Avg.		Avg.		Avg.		Incr. In	Incr. In
#	Intersection	Standard	Hour	Date	Delay	LOS	Delay	LOS	Delay	LOS	Crit. Delay	Crit. V/C
3	Meridian Avenue and Fruitdale Avenue	D	AM	05/22/19	40.7	D	42.2	D	42.5	D	0.4	0.010
			PM	05/22/19	38.5	D	39.6	D	40.5	D	1.4	0.020
4	Meridian Avenue and Curci Drive	D	AM	05/22/19	10.1	В	12.0	В	12.0	В	0.0	0.001
			PM	05/22/19	11.4	В	12.8	В	12.8	В	0.0	0.001
5	Southwest Expressway and Fruitdale Avenue	D	AM	05/22/19	30.1	С	30.2	С	30.3	С	0.2	0.003
	•		PM	05/22/19	36.4	D	37.8	D	38.1	D	0.2	0.002

Bold indicates unacceptable level of service.

Bold and boxed indicate adverse operations effect.



### Race Street and I-280 Northbound Off-Ramp

Queueing within the northbound shared right turn/through lane at the intersection of Race Street and Parkmoor Avenue extends back to the I-280 NB off-ramp during the AM peak hour. South of the I-280 NB off-ramp, the queue was observed to extend further south along Race Street by approximately six vehicles. The observed queue also inhibited all westbound right-turns from the I-280 NB off-ramp. The observed maximum westbound right-turn lane queue was observed to be approximately 20 vehicles on the I-280 NB off-ramp. Based on observations, most vehicles turning right onto Parkmoor Avenue are entering into the northwest entrance of the BASIS Independent Silicon Valley School.

The queue within the northbound through lane (center lane) at the Race Street and Parkmoor Avenue intersection extends back to the I-280 Northbound Off-Ramp intersection, but clears, even during signal cycles when the railroad crossing just north of Race Street and Parkmoor Avenue is active.

No problems were observed for the westbound left-turn movement from the I-280 Northbound Off-Ramp onto southbound Race Street during the AM peak hour.

During the PM peak hour, the westbound left-turn queue on the off-ramp was observed to extend back a maximum of approximately five vehicles. No sight distance issues for the westbound left-turning vehicles were observed. Additionally, when the railroad is active, the northbound queue on Parkmoor Avenue extends to the I-280 Northbound Off-Ramp, resulting in the westbound right-turn lane to extend back a maximum of approximately six vehicles. However, adequate green time is provided to clear the queue.

### **Meridian Avenue and Curci Drive**

During the PM peak hour, southbound traffic was observed to extend back approximately 250 feet north of Curci Drive, past the proposed location of the project driveway.

All other study intersections operate without any major operational problems.

### **Future Intersection Operation Conditions**

The operations analysis shows that operate all signalized study intersections would continue to operate at an acceptable LOS D or better during both the AM and PM peak hours, based on the City of San Jose intersection operations standard of LOS D. The level of service calculation sheets are included in Appendix E.

The unsignalized study intersections of Race Street/I-280 Northbound Off-Ramp and Race Street/Fruitdale Avenue were analyzed for operational purposes, based on the Peak-Hour Volume Signal Warrant, (Warrant #3 – Part B) described in the California *Manual on Uniform Traffic Control Devices* (MUTCD), 2014 Edition. The results of the peak-hour traffic signal warrant checks indicate that the unsignalized study intersections are projected to have traffic volumes that would fall below the thresholds that warrant signalization under all future study conditions. The peak-hour signal warrant sheets are contained in Appendix G.

# **Intersection Queuing Analysis**

The analysis of intersection level of service operations was supplemented with a vehicle queuing analysis at intersections where the project would add a substantial number of trips to the left-turn movements. The queuing analysis is presented for informational purposes only, since the City of San Jose has not defined a policy related to queuing. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:



P (x=n) = 
$$\frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

P(x=n) = probability of "n" vehicles in queue per lane

n = number of vehicles in the gueue per lane

 $\lambda$  = average # of vehicles in the gueue per lane (vehicles per hr per lane/signal cycles per hr)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95<sup>th</sup> percentile maximum number of queued vehicles for a particular left-turn movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the left-turn movement. This analysis thus provides a basis for estimating future turn pocket storage requirements at intersections.

For signalized intersections, the 95<sup>th</sup> percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles. Or, a queue length larger than the 95<sup>th</sup> percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Thus, turn pocket storage designs based on the 95<sup>th</sup> percentile queue length would ensure that storage space would be exceeded only 5 percent of the time for a signalized movement. Vehicle queuing at unsignalized intersections are evaluated based on the delay experienced at the specific study turn movement. The intersection queueing analysis is presented in Table 7.

### Meridian Avenue and Fruitdale Avenue

### **Eastbound Right-Turn**

The queuing analysis indicates that the projected maximum vehicle queue for the eastbound right-turn movement at the Meridian Avenue and Fruitdale Avenue intersection currently exceeds the existing vehicle storage capacity during the PM peak hour and would continue to do so under background and project conditions during the PM peak hour.

The eastbound right-turn lane on Fruitdale Avenue currently provides approximately 425 feet of vehicle storage, which can accommodate approximately 17 vehicles, between Meridian Avenue and the upstream intersection with St. Elizabeth Drive. The estimated 95<sup>th</sup> percentile vehicle queue for the eastbound right-turn movement is currently estimated at approximately 23 vehicles during the PM peak hour and is projected to be approximately 24 vehicles under background conditions. The addition of project traffic is projected to lengthen the projected queue by one vehicle, to a total of 25 vehicles, during the PM peak hour.

The eastbound right-turn lane already extends to the upstream intersection of St. Elizabeth Drive and Fruitdale Avenue and the addition of a second right-turn lane would not be feasible.



Table 7
Queuing Analysis Summary

	Race/ I-280 NB Off- Ramp			Meri Fruit	dian/ tdale			nwest/ tdale	Meridian/ Project Access		
Measurement	WBL AM	WBL PM	WBL AM	WBL PM	EBR AM	EBR PM	SBL AM	SBL PM	NBL AM	NBL PM	
	7.00	1 141	7.00	1 101	7.00		7-101		7401		
Existing Conditions											
Cycle/Delay <sup>1</sup> (sec)	11.4	16.1	166	140	166	140	140	152			
Lanes	1	1	2	2	1	1	2	2			
Volume (vph)	160	337	153	256	208	414	141	187			
Volume (vphpl)	160	337	77	128	208	414	71	94			
Avg. Queue (veh/ln.)	1	2	4	5	10	16	3	4			
Avg. Queue <sup>2</sup> (ft./ln)	13	38	88	124	240	403	69	99			
95th %. Queue (veh/ln.)	2	4	7	9	15	23	6	7			
95th %. Queue (ft./ln)	50	100	175	225	375	575	150	175			
Storage (ft./ ln.)	400	400	350	350	425	425	250	250			
Adequate (Y/N)	YES	YES	YES	YES	YES	NO	YES	YES			
Background Conditions	;										
Cycle/Delay <sup>1</sup> (sec)	11.5	17.0	166	140	166	140	140	152			
Lanes	1	1	2	2	1	1	2	2			
Volume (vph)	160	337	160	270	241	440	151	191			
Volume (vphpl)	160	337	80	135	241	440	76	96			
Avg. Queue (veh/ln.)	1	2	4	5	11	17	3	4			
Avg. Queue <sup>2</sup> (ft./ln)	13	40	92	131	278	428	73	101			
95th %. Queue (veh/ln.)	2	4	7	9	17	24	6	8			
95th %. Queue (ft./ln)	50	100	175	225	425	600	150	200			
Storage (ft./ ln.)	400	400	350	350	425	425	250	250			
Adequate (Y/N)	YES	YES	YES	YES	YES	NO	YES	YES			
Background Plus Projec	t Conditi	ons									
Cycle/Delay <sup>1</sup> (sec)	11.5	17.5	166	140	166	140	140	152	9.8	17.8	
Lanes	1	1	2	2	1	1	2	2	1	1	
Volume (vph)	163	346	164	282	247	457	154	200	2	5	
Volume (vphpl)	163	346	82	141	247	457	77	100	2	5	
Avg. Queue (veh/ln.)	1	2	4	5	11	18	3	4	0	0	
Avg. Queue <sup>2</sup> (ft./ln)	13	42	95	137	285	444	75	106	0	1	
95th %. Queue (veh/ln.)	2	4	7	10	17	25	6	8	1	1	
95th %. Queue (ft./ln)	50	100	175	250	425	625	150	200	25	25	
Storage (ft./ ln.)	400	400	350	350	425	425	250	250	25	25	
J , ,	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	

<sup>&</sup>lt;sup>1</sup> Vehicle queue calculations based on cycle length for signalized intersections and control delay for unsignalized intersections.

### Site Access and On-Site Circulation

The evaluation of site access and circulation is based on the September 17, 2019 site plan prepared by Withee Malcolm Architects. Site access was evaluated to determine the adequacy of the site's access points with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles. The site plan is shown on Figure 2.



<sup>&</sup>lt;sup>2</sup> Assumes 25 feet per vehicle in the queue.

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, R = Right, T = Through, L = Left.

### **Project Driveway Design**

Vehicular access to the project site will be provided via a full-access driveway on Meridian Avenue along the south side of the project site, approximately 190 feet north of the Meridian Avenue and Curci Drive intersection. A secondary truck access driveway would be located along the northern edge of the site and would provide access to a truck loading dock and fire lane. The primary (south) project driveway, shown to be 20 feet wide, will need to be widened to at least 26 feet to meet the City's requirement for two-way multi-family residential driveways. The secondary (north) driveway, shown to be 26 feet wide, will meet the City's minimum 26-foot width.

### **Sight Distance**

Adequate sight distance will be required at the project driveways along Meridian Avenue. The project access points should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on Meridian Avenue. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers exiting the site.

Adequate sight distance (sight distance triangles) should be provided at the project driveway in accordance with the *American Association of State Highway Transportation Officials* (AASHTO) standards. Sight distance triangles should be measured approximately 10 feet back from the traveled way. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway or intersection and provides drivers with the ability to exit a driveway and locate sufficient gaps in traffic. The minimum acceptable sight distance is often considered the AASHTO stopping sight distance. Sight distance requirements vary depending on the roadway speeds. Meridian Avenue has a posted speed limit of 35 miles per hour (mph). The AASHTO stopping sight distance for a facility with a posted speed limit of 35 mph is 250 feet. Thus, a driver exiting the proposed project driveway on Meridian Avenue must be able to see 250 feet to the north along Meridian Avenue in order to stop and avoid a collision.

Based on the project site plan and observations in the field, vehicles making a right-turn out of the project site driveways on Meridian Avenue would be able to see approaching traffic on southbound Meridian Avenue at least to Fruitdale Avenue located approximately 800 feet to the north. Vehicles making a left turn out of either project driveway would utilize the median turn lane along Meridian Avenue before merging onto the northbound travel lanes on Meridian Avenue. However, left-turning project traffic also would be able to see approaching traffic on northbound Meridian Avenue for at least 250 feet to the south. Therefore, it can be concluded that the project driveway on Meridian Avenue would meet the AASHTO minimum stopping sight distance standards.

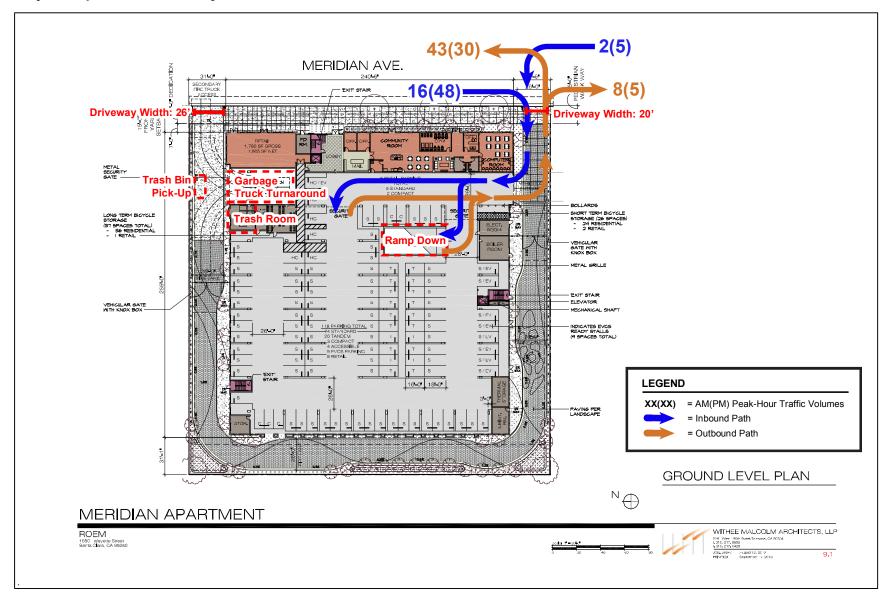
# **Project Driveway Operations**

All residential and retail project traffic would enter at the southern driveway. Based on the project trip generation and trip assignment, it is estimated that a maximum of 53 inbound trips (during the PM peak hour) and 51 outbound trips (during the AM peak hour) would enter and exit the site at the primary access driveway. The estimated project trips at the project site driveway is shown on Figure 18.

An entrance to the on-site parking garage will be located approximately 60 feet west of Meridian Avenue. The parking garage will have publicly accessible parking spaces for the retail use, while residential spaces will be located in a secured, gated area. Two entry gates for the residential parking spaces will be located within the parking structure, approximately 40 feet north and 120 feet north of the garage entrance. Given an average arrival rate of only one vehicle per minute throughout the PM peakhour, no inbound queueing is expected at the security gates. However, storage space for approximately four vehicles would be provided between the first residential gate and the project driveway.



Figure 18 Project Trips at Site Driveways





inbound left-turn analysis into the project driveway from northbound Meridian Avenue was conducted as part of the queueing analysis. As shown on Table 7, a maximum inbound queue of one left-turning vehicle can be expected to form within the two-way left-turn lane of Meridian Avenue. The minimal projected queue would not be expected to interfere with southbound vehicles entering an existing driveway located across from the project site at 970 Meridian Avenue, approximately 30 feet south of the proposed project driveway.

Field observations indicated that the southbound queue at the intersection of Meridian Avenue and Curci Drive often extended back past the proposed southern project driveway on Meridian Avenue. "Keep Clear" signage on Meridian Avenue at the project driveway would not be feasible because Meridian Avenue is a major arterial and the project driveway is located in close proximity to the intersection of Meridian Avenue and Curci Drive. Therefore, vehicles exiting the project site would need to wait for a gap in traffic to merge onto Meridian Avenue.

#### On-Site Circulation

On-site vehicular circulation was reviewed in accordance with the City of San Jose Zoning Code and generally accepted traffic engineering standards.

Vehicles bound for the on-site parking structure will enter via the primary (south) project driveway. As described earlier, the 20-foot driveway will need to be widened to 26 feet to meet the City's requirement for two-way residential access. The drive aisle between the driveway and the ground-floor parking entrance should also match the driveway's 26-foot width.

The project would provide 90-degree parking stalls at the ground-floor level and within the below-ground parking level, shown in Figure 18 and Figure 19. On-site drive aisles are shown to be 26 feet wide and will meet the City's minimum requirement for two-way drive aisle width. The proposed parking space dimensions of 16 to 18 feet in length and 9 feet in width will meet the City's standards for full-sized and compact-size parking spaces. The City identifies full-size parking spaces as 18 feet long and 9 feet wide and compact parking spaces as 16 feet long and 8 feet wide. The 16-foot long spaces are provided as tandem parking spaces.

In general, the proposed on-site circulation layout provides for a mostly continuous circulation within the parking garage. However, dead-end aisles are located within the northeast corners of the both the ground-floor and below-ground parking levels. Dead-ends are undesirable because vehicles must park at a parking space or perform a U-turn to exit the parking structure. The site plan should be adjusted to provide looped drive aisles within the parking levels or provide adequate turn-around space for U-turning vehicles adjacent to all dead-end drive aisles. This adjustment will require the removal or relocation of planned parking spaces. Alternatively, implementation of assigned parking would eliminate the need for residents to circulate the garage for available parking spaces and the dead-end aisles would not be problematic.

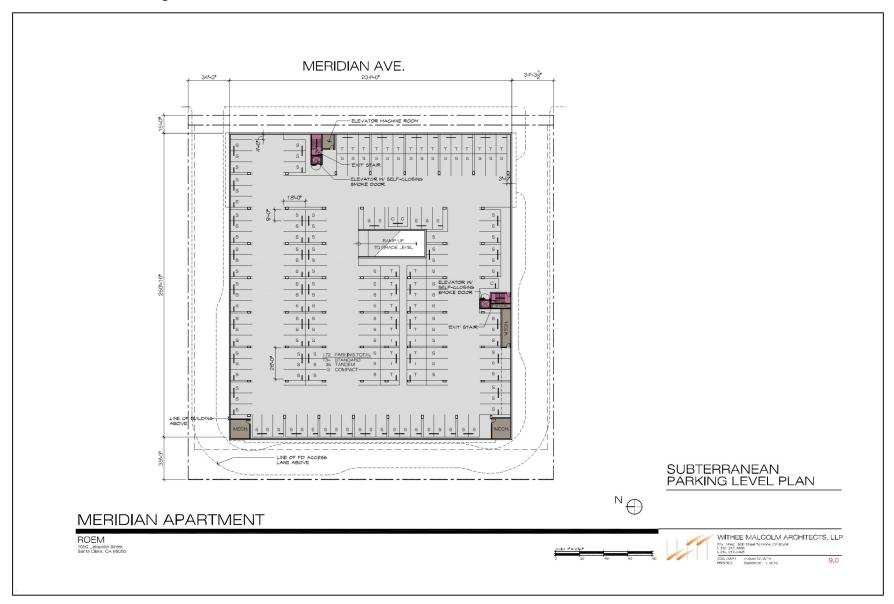
The retail parking area located between the garage entrance and residential security gates would be considered a dead-end aisle for users of the retail use, since they will not have access to the gates. If a driver were to enter the garage and find all retail parking spaces occupied, the driver will turn around within the 26-foot wide drive aisle or back out to the garage entrance. It is recommended that the drive aisle serving the retail parking spaces be widened to provide additional space for a vehicle to turn around or the northernmost security gate could be moved west by approximately one car-length (or 25 feet) so that a turn-around space could be provided at the northern end of the drive aisle.

### **Bike and Pedestrian On-Site Circulation**

The project site plan shows access to the residential lobby and the retail area from the sidewalk along the east project frontage on Meridian Avenue. The existing sidewalk along the project frontage, which



Figure 19
Below-Ground Parking Level Plan





measures approximately 7 feet wide, is proposed to be re-constructed at 15 feet wide. The project fronts Meridian Avenue, a designated Grand Boulevard per the City's General Plan. The City encourages developments to provide a minimum 20-foot wide sidewalk along most Grand Boulevard frontages. However, it should be noted that the proposed 15-foot sidewalk width is consistent with the minimum frontage sidewalk widths required by most other adopted Urban Village plans in San Jose (there is no adopted plan for the Southwest Expressway Urban Village).

Access to a long-term bicycle storage room would be provided from the residential lobby and the retail area via a walkway within the parking garage. Based on the site plan, the long-term bicycle storage room would be located behind a security gate and would be used by residents and employees of the development. A separate short-term bicycle storage room would be publicly accessible, located adjacent to the parking garage entrance with access provided by a sidewalk adjacent to the drive aisle.

### **Truck and Emergency Vehicle Access**

A fire lane located along the project's north, west, and south frontages would be accessible from both project driveways. However, the fire lane will be gated and will only be accessible to emergency vehicles. Gates will be located just west of the parking garage entrance along the south drive aisle and just west of the loading dock along the north drive aisle. The fire lane, which is shown to be between 20 to 26 feet wide, should be provided a 26-foot wide horizontal clearance to accommodate emergency vehicles.

Trash pick-up will occur on-site. Trash bins are proposed to be wheeled out to a designated location (shown on Figure 20), approximately 50 feet west of the northern project site driveway along a 31-foot wide drive aisle. Trucks will enter the driveway and turn left into a turnaround space located south of the trash pickup location. Once trash pickup is complete, the truck will reverse into the drive aisle (west of the trash bins) and exit forward out of the driveway onto Meridian Avenue. Truck turning paths for a rearload garbage truck indicate that adequate space will be provided along the drive aisle and within the turnaround space for trucks to maneuver. The analysis is based on a custom design vehicle with a minimum vehicle turning radius of 38.5 feet for the inside wheel and 50 feet for the outside wheel of the truck, which meets the minimum requirement per City standards of 34 feet for the inside wheel and 50 feet for the outside wheel (City of San Jose Solid Waste Enclosure Area Guidelines, April 2011).

# **Parking Supply**

# Vehicular Parking

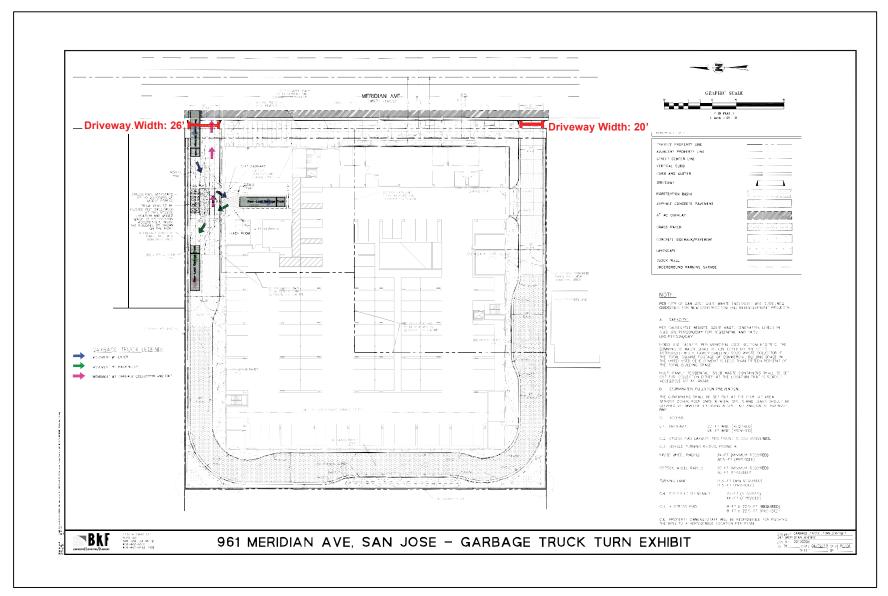
The City of San Jose Zoning Code (Section 20.90.060) indicates that the required parking spaces for multi-family residential units is dependent on the living unit size. The parking requirements that would apply to the project are as follows:

- 1.25 spaces per one-bedroom unit
- 1.7 spaces per two-bedroom unit
- 2.0 spaces per three-bedroom unit

Per the City's standard parking requirements, the project would be required to provide 389 off-street parking spaces for the proposed 233 residential units. The City code also requires one parking space per 200 s.f. for floor area of the proposed retail use. The project would be required to provide 9 parking spaces for the 1,780 s.f. retail use. Based on the City's parking requirements, the project would be required to provide a total of 398 parking spaces before any reductions. However, a 20 percent reduction can be granted for proposed projects within an Urban Village which provide bicycle parking spaces per City requirements. Based on the City's parking code and an application of a 20 percent Urban Village



Figure 20 Garbage Truck Turning Exhibit





reduction, the project would be required to provide a total of 319 vehicle parking spaces (311 spaces for the residential use and 8 spaces for the retail use), as shown on Table 8.

Table 8
Vehicle Parking Requirement

				General (	Urban Village
Proposed Project		City of San .	Required	Required	
Land Use	Size	Land Use	Parking Ratio	Parking	Parking <sup>2</sup>
Residential	67 units	Multiple dwelling residential	1.25 spaces per one-bedroom unit	84	67
Residential	90 units	Multiple dwelling residential	1.70 spaces per two-bedroom unit	153	122
Residential	76 units	Multiple dwelling residential	2.00 spaces per three-bedroom unit	152	122
Sub-Total	233 units			389	311
Retail	1,780 s.f.	Retail sales, goods, and merchane	dise 1.00 space per 200 s.f. of floor area	9	8
Total				398	319
Total Notes:				398	319

The project is proposing to provide a total of 290 parking spaces on-site, consisting of 282 spaces for the residential use and 8 spaces for the retail use. Based on the City code, sufficient parking would be provided for the retail use. The project proposes an additional 9% reduction from the City requirement for the residential use.

### **State Vehicluar Parking Requirements**

California Assembly Bill (AB) 744 prevents local jurisdictions from imposing vehicular parking requirements higher than those established by the legislation, provided that the project includes enumerated percentages of affordable housing and is located near designated public transit. The project consists of 100 percent affordable units. The project site is located less than 0.5 mile from the Fruitdale LRT station and is located along the Meridian Avenue corridor which is served by local bus routes 25 and 64B. AB 744 states that for 100 percent affordable housing projects located within 0.5 mile of a major transit stop, the parking requirement cannot exceed 0.5 spaces per unit, which equates to 117 parking spaces for the 233 units proposed by the project.

Based on the AB 744 affordable housing parking rate and the City rate for retail uses, the project would be required to provide a total of 125 vehicle parking spaces. The project proposes to provide 290 parking spaces, consisting of 282 spaces for the residential use and 8 spaces for the retail use. Therefore, the project would provide on-site parking that exceeds the State's parking requirements.

It should also be noted that City Code 20.190.060 allows for an additional parking reduction incentive for projects that qualify for the State's Housing Density Bonus (AB 744). However, this reduction is based on the restricted affordable unit categories (i.e. Very Low Income, Low Income, and Moderate Income as defined in AB 744). The project has not provided its proposed renting level and the parking reduction cannot be evaluated.

### **Bicycle Parking**

According to the City's Bicycle Parking Standards (Chapter 20.90, Table 20-210), the project is required to provide bicycle parking for the 233 residential units at a rate of one bicycle parking space per four



residential units. For the proposed 1,780 s.f. of retail use, a minimum of three spaces should be provided at a rate of one bicycle parking space per 3,000 s.f. of floor area (Table 20-190). This equates to a total requirement of 59 bicycle parking spaces for the residential use and 3 parking spaces for the retail use. Of the required residential bicycle parking, City standards require that at least 60 percent be secured long-term bicycle spaces and at most 40 percent be short-term bicycle spaces. Of the required retail bicycle parking, City standards require that at least 80 percent be short-term bicycle spaces and at most 20 percent be secured long-term bicycle spaces. Based on these requirements, the project is required to provide a total of 62 bicycle parking spaces consisting of 25 short-term parking spaces and 37 long-term parking spaces. The City's definition of short-term and long-term bicycle parking is described below.

### City of San Jose Long-Term and Short-Term Bicycle Parking

Long-term bicycle parking facilities are secure bicycle storage facilities for tenants of a building that fully enclose and protect bicycles and may include:

- A covered, access-controlled enclosure such as a fenced and gated area with short-term bicycle parking facilities,
- An access-controlled room with short-term bicycle parking facilities, and
- Individual bicycle lockers that securely enclose one bicycle per locker.

Short-term bicycle parking facilities are accessible and usable by visitors, guests, or business patrons and may include:

- Permanently anchored bicycle racks,
- Covered, lockable enclosures with permanently anchored racks for bicycles,
- · Lockable bicycle rooms with permanently anchored racks, and
- Lockable, permanently anchored bicycle lockers.

A long-term bicycle storage room and short-term bicycle storage room will be located within the ground-floor level of the parking garage. The project proposes to provide a total of 63 bicycle parking spaces consisting of 26 short-term parking spaces and 37 long-term parking spaces. Therefore, the proposed bicycle parking of the project will exceed the City's Bicycle Parking Standards.

# Pedestrian, Bicycle, and Transit Analysis

All new development projects in San Jose should encourage multi-modal travel, consistent with the goals of the City's General Plan. It is the goal of the General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve San Jose's mobility goals and reduce vehicle trip generation and vehicle miles traveled. In addition, the adopted City Bike Master Plan establishes goals, policies and actions to make bicycling a daily part of life in San Jose. The Master Plan includes designated bike lanes along all City streets, as well as on designated bike corridors. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

The proposed project site is located within the Southwest Expressway Urban Village Boundary and fronts Meridian Avenue, which has been designated as a Grand Boulevard by the Envision San José 2040 General Plan. Sites within an Urban Village and located along a Grand Boulevard must incorporate additional urban design and architectural elements that will facilitate a building with pedestrian orientated design and activate the pedestrian public right-of-way.

The Envision 2040 General Plan identifies goals and policies that are dedicated to the enhancement of the transportation infrastructure, including public transit and pedestrian/bike facilities. The Transportation



Policies contained in the General Plan create incentives for non-auto modes of travel while reducing the use of single-occupant automobile travel as generally described below:

- Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling walking, and transit facilities.
- Give priority to the funding of multimodal projects to provide the most benefit to all users of the transportation system.
- Encourage the use of non-automobile travel modes to reduce vehicle miles traveled (VMT)
- Consider the impact on the overall transportation system when evaluating the impacts of new developments.
- Increase substantially the proportion of travel modes other than single-occupant vehicles.

The City's General Plan identifies both walk and bicycle commute mode split targets as 15 percent or more by the year 2040. This level of pedestrian and bicycle mode share is a reasonable goal for the project, particularly if bus services are utilized in combination with bicycle commuting.

### **Pedestrian Facilities**

Pedestrian facilities in the study area consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections (see Chapter 2 for details).

Pedestrian generators in the project vicinity include the Fruitdale LRT Station, commercial and office plazas in the vicinity of the Meridian Avenue/Willow Street intersection, and bus stops along the Meridian Avenue and Fruitdale Avenue corridors. The project site is within the service boundaries of Blackford Elementary School and Monroe Middle School which are part of the Campbell Union School District. Blackford Elementary School is located approximately 0.85-mile south of the project site along Willow Street while Monroe Middle School is located approximately two miles west of the project site near Williams Road and Monroe Street.

Existing sidewalks along Meridian Avenue, Fruitdale Avenue, and Willow Street provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity, including the Fruitdale LRT Station and Blackford Elementary School. Pedestrian access across SR-17 is provided via a pedestrian footbridge connecting Westfield Avenue and Downing Avenue. Although no sidewalks are provided along Meridian Avenue between Fruitdale Avenue and Parkmoor Avenue, a footbridge across I-280 is provided west of Meridian Avenue between Parkmoor Avenue and Moorpark Avenue. Sidewalks along Race Street may also be used to cross the I-280 corridor.

### **Pedestrian Facility Improvements**

Meridian Avenue has been designated as a Grand Boulevard within the Envision 2040 General Plan. Grand Boulevards are intended to serve as major transportation corridors with priority given to public transit. The City encourages developments to provide a minimum 20-foot wide sidewalk along most Grand Boulevard frontages. However, it should be noted that the proposed 15-foot sidewalk width is consistent with the minimum frontage sidewalk widths required by most other adopted Urban Village plans in San Jose (there is no adopted plan for the Southwest Expressway Urban Village).

The intersection of Meridian Avenue and Curci Drive provides an east-west crosswalk along its south approach only. The installation of an east-west crosswalk across its north approach would reduce by approximately 200 feet the walking distance between the project site and the nearest northbound bus stop along Meridian Avenue. However, a protected pedestrian phase cannot be provided for a north approach crosswalk since there is no westbound approach leg. Therefore, the addition of a crosswalk on the north leg is not recommended. In addition, the curb ramps located at the intersection's northwest and southeast corners are not ADA compatible.



### **Bicycle Facilities**

There are several bike facilities in the immediate vicinity of the project site (see Chapter 2 for details).

The bikeways within the vicinity of the project site would remain unchanged under project conditions. There are currently no bike lanes along Meridian Avenue in the vicinity of the project site. However, there are bike lanes provided along Southwest Expressway and Willow Street, less than ½ mile from the project site.

As previously described, the City's General Plan identifies a bicycle commute mode split target of 15 percent or more by the year 2040. This calculates to approximately 10 and 13 new bicycle trips during the AM and PM peak hours, respectively. This level of bicycle mode share is a reasonable goal for the project.

### **Bicycle and Pedestrian Facility Improvements**

The Envision 2040 General Plan identifies the following goals in regard to bicycling and pedestrians:

- Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments.
- Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation.
- Give priority to pedestrian improvement projects that improve pedestrian safety, improve pedestrian access to and within the Urban Villages and other growth areas.

The planned improvements discussed below will provide the project site with viable connections to surrounding pedestrian/bike and transit facilities and provide for a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies. However, the full implementation of the improvements are beyond the means of the proposed project given that they may require right-of-way from adjacent properties.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class II bike lanes are planned for:

- Fruitdale Avenue, between Southwest Expressway and Race Street
- Race Street, between Fruitdale Avenue and Parkmoor Avenue

### **Transit Services**

The project site is adequately served by the existing VTA transit services. The project site is primarily served by three VTA bus routes: Frequent Bus Route 25, Local Bus Route 64B, and Express Bus Route 103. Additionally, the Fruitdale LRT Station is located within 1/3 of a mile from the project site at the southwest corner of the intersection of Southwest Expressway and Fruitdale Avenue. LRT service at the Fruitdale LRT Station is provided by the Mountain View-Winchester LRT line. The Mountain View-Winchester LRT line provides access to the Diridon Transit Center, located approximately two miles north of the project site. Connections between local and regional bus routes, light rail lines, and commuter rail lines are provided within the Diridon Transit Center (see Chapter 2 for details). The new transit trips generated by the project are not expected to create demand in excess of the transit service that is currently provided.



# **Freeway Off-Ramp Analysis**

An evaluation of unsignalized freeway off-ramps was performed to identify the effect of the addition of project traffic on the operations at two freeway off-ramps. It should be noted that the City has not adopted methodologies or impact criteria for the analysis of freeway ramps.

### Race Street and I-280 Northbound Off-Ramp

The intersection of Race Street and the I-280 northbound off-ramp is a one-way stop-controlled intersection. As shown on Table 7, a westbound left-turn queue of approximately two and four vehicles are estimated to form during the AM and PM peak hours, respectively, at this off-ramp. The existing 400-foot storage length of the left-turn lane can accommodate the estimated queues. The addition of approved trips and project traffic increases the critical delay of the westbound left-turn movement. However, the westbound left-turn queue is not expected to increase during the AM and PM peak hours.

Signal warrant analysis also indicates that traffic volumes at this stop-controlled intersection will not exceed the thresholds that warrant signalization under any of the study scenarios. The peak-hour signal warrant sheets are contained in Appendix D.

### Meridian Avenue and I-280 Southbound Off-Ramp

The I-280 southbound off-ramp at Meridian Avenue is an uncontrolled freeway off-ramp. During the PM peak hour, the southbound queue at Meridian Avenue and Fruitdale Avenue intersection was observed to extend back to the Meridian Avenue and I-280 Southbound off-ramp. The queue on Meridian Avenue causes vehicles from the off-ramp to form a short queue (maximum of two vehicles) on the off-ramp as they merge onto Meridian Avenue.

Based on the project trip assignment, the project will add approximately 5 and 16 trips from the off-ramp onto Meridian Avenue during the AM and PM peak-hour, respectively. Given that the ramp currently exhibits only minor queuing, it can be expected that the small number of additional project trips will not significantly worsen the existing queue.

# **Trip Reduction (TDM Program)**

As described above, the project is proposing a 29% reduction in required off-street parking. A 20% reduction can be granted for the project located within an Urban Village. In order to be granted an additional 9% reduction in required off-street parking, the project will be required to establish a TDM program that will reduce the parking demand for the proposed residential units. The TDM program should encourage multimodal travel and use of the extensive bus service and pedestrian/bicycle facilities in the immediate project area to the maximum extent possible. The applicant/property owner should manage the TDM program to ensure tenant participation. The project will be required to submit and have approved by the City its TDM program.

The project TDM program may include, but would not be limited to, the following, or alternative equivalent, elements to reduce vehicle trips:

- Smart Pass or Clipper Card for all employees, providing free rides on Santa Clara County's local transit agency, the Santa Clara Valley Transportation Authority (VTA)
- 25% Transit Subsidy for transit agencies other than the VTA, including Caltrain, ACE, Capitol Corridor, BART, MUNI, and other
- Monthly Vanpool Subsidy



- Commuter Tax Benefits through WageWorks offering pre-tax deduction per month for transit and pre-tax deduction per month for parking
- Free "Last Mile" Shuttles to local train systems (e.g. Caltrain, Amtrak, ACE)
- Free WiFi Commuter Buses direct from areas like San Francisco and the TriValley area
- Internal Carpool Matching Program utilizing zip code matching
- Regional Carpool Matching Program through 511
- Personalized Commute Assistance offered by a Commute Coordinator
- Preferred parking for Carpools and Vanpools located near entrances to every building
- Bicycle Lockers and/or Bicycle Racks near entrances to every building
- Showers for cyclists and pedestrians, offering clean towel service, complimentary toiletries, hair dryers, and ironing boards
- Intranet Site featuring transit, bike, ridesharing and telework information
- New Hire Orientation presentations focusing on commute alternatives from Day 1
- Centrally-Located Kiosks with transit schedules, bike and transit maps, and other commute alternative information
- Periodic Events which connect employees with local transit agencies and transportation organizations (e.g. Spare the Air Fair, Bike to Work Day)
- Onsite amenities which allow employees to complete errands without a car, such as bicycle repair, dry cleaning, oil changes, carwash, haircuts, dental services, cafeteria, coffee bars, fitness center, massage services, mail and shipping services, convenience store, ATM, gift store.



# 5. Conclusions

The transportation analysis of the project was evaluated following the standards and methodologies set forth in the City of San Jose's *Transportation Analysis Handbook 2018*, the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program's *Transportation Impact Guidelines* (October 2014), and by the California Environmental Quality Act (CEQA). Based on the City of San Jose's Transportation Policy and *Transportation Analysis Handbook 2018*, the TA report for the project consists of a CEQA vehicle-miles-traveled (VMT) analysis and a supplemental Local Transportation Analysis (LTA).

# **CEQA VMT Analysis**

## **CEQA Transportation Analysis Exemption Criteria**

The project site is located within a planned Growth Area (proposed Southwest Expressway Urban Village) with low VMT per capita as identified by the City of San Jose. The residential component of the proposed project will meet all of the applicable VMT screening criteria for affordable residential projects and the proposed 1,780 s.f. of retail space is less than the 100,000 s.f. retail threshold screening criterion for local-serving retail. Therefore, both the residential and retail components of the proposed project are screened from the evaluation of VMT and is considered to result in a less-than significant VMT impact.

## **Cumulative (GP Consistency) Evaluation**

Projects must demonstrate consistency with the *Envision San José 2040 General Plan* to address cumulative impacts. Consistency with the City's General Plan is based on the project's density, design, and conformance to the General Plan goals and policies. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required per the City's *Transportation Analysis Handbook*.

The proposed project will be consistent with General Plan policy TR-3.3 that states:

As part of the development review process, require that new development along existing and
planned transit facilities consist of land use and development types and intensities that
contribute towards transit ridership. In addition, require that new development is designed to
accommodate and to provide direct access to transit facilities.

The project is consistent with the General Plan goals and policies for the following reasons:

• The project site adjacent to bus stops on Meridian Avenue.



- The project site is in close proximity to the Fruitdale LRT station that is located within 1/3 of a mile from the project site at the southwest corner of the intersection of Southwest Expressway and Fruitdale Avenue. The Mountain View-Winchester LRT line provides access to the Diridon Transit Center, located approximately two miles north of the project site. Connections between local and regional bus routes, light rail lines, and commuter rail lines are provided within the Diridon Transit Center.
- The project frontage along Meridian Avenue will be designed to be consistent with planned streetscape design features of Grand Boulevards, such as wider sidewalks.

Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be considered as part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

# **Local Transportation Analysis**

### **Future Intersection Operation Conditions**

The operations analysis shows that all signalized study intersections are projected to operate at an acceptable LOS D or better during both the AM and PM peak hours, under background conditions, and background plus project conditions.

The results of the peak-hour traffic signal warrant checks indicate that the unsignalized study intersections are projected to have traffic volumes that would fall below the thresholds that warrant signalization under all future study conditions.

### Site Access and On-Site Circulation

Site access was evaluated to determine the adequacy of the site's access points with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

### Recommended Site Access and On-Site Circulation Improvements

<u>Provide Turn Around Space.</u> It is recommended that the drive aisle serving the retail parking spaces be widened to provide additional space for a vehicle to turn around or the northernmost security gate could be moved west by approximately one car-length (or 25 feet) so that a turn-around space could be provided at the northern end of the drive aisle.

<u>Fire Lane Clearance</u>. The fire lane, which is shown to be between 20 to 26 feet wide, should be provided a 26-foot wide horizontal clearance to accommodate emergency vehicles.

### **Parking Supply**

### Vehicular Parking

Based on the City's parking requirements, the project would be required to provide a total of 398 parking spaces before any reductions. However, a 20 percent reduction can be granted for proposed projects within an Urban Village which provide bicycle parking spaces per City requirements. Based on the City's parking code and an application of a 20 percent Urban Village reduction, the project would be required to provide a total of 319 vehicle parking spaces (311 spaces for the residential use and 8 spaces for the retail use).



The project is proposing to provide a total of 290 parking spaces on-site, consisting of 282 spaces for the residential use and 8 spaces for the retail use. Based on the City code, sufficient parking would be provided for the retail use. The project proposes an additional 9% reduction from the City requirement for the residential use.

### **Bicycle Parking**

According to the City's Bicycle Parking Standards (Chapter 20.90, Table 20-210), the project is required to provide a total of 62 bicycle parking spaces consisting of 25 short-term parking spaces and 37 long-term parking spaces. A long-term bicycle storage room and short-term bicycle storage room will be located within the ground-floor level of the parking garage. The project proposes to provide a total of 63 bicycle parking spaces consisting of 26 short-term parking spaces and 37 long-term parking spaces. Therefore, the proposed bicycle parking of the project will exceed the City's Bicycle Parking Standards.

### Pedestrian, Bicycle, and Transit Analysis

### **Pedestrian Facilities**

Existing sidewalks along Meridian Avenue, Fruitdale Avenue, and Willow Street provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity, including the Fruitdale LRT Station and Blackford Elementary School. Pedestrian access across SR-17 is provided via a pedestrian footbridge connecting Westfield Avenue and Downing Avenue. Although no sidewalks are provided along Meridian Avenue between Fruitdale Avenue and Parkmoor Avenue, a footbridge across I-280 is provided west of Meridian Avenue between Parkmoor Avenue and Moorpark Avenue. Sidewalks along Race Street may also be used to cross the I-280 corridor.

Meridian Avenue has been designated as a Grand Boulevard within the Envision 2040 General Plan. Grand Boulevards are intended to serve as major transportation corridors with priority given to public transit. The City encourages developments to provide a minimum 20-foot wide sidewalk along most Grand Boulevard frontages. However, it should be noted that the proposed 15-foot sidewalk width is consistent with the minimum frontage sidewalk widths required by most other adopted Urban Village plans in San Jose (there is no adopted plan for the Southwest Expressway Urban Village). The intersection of Meridian Avenue and Curci Drive provides an east-west crosswalk along its south approach only. The installation of an east-west crosswalk across its north approach would reduce by approximately 200 feet the walking distance between the project site and the nearest northbound bus stop along Meridian Avenue. However, a protected pedestrian phase cannot be provided for a north approach crosswalk since there is no westbound approach leg. Therefore, the addition of a crosswalk on the north leg is not recommended. In addition, the curb ramps located at the intersection's northwest and southeast corners are not ADA compatible.

### **Bicycle Facilities**

The bikeways within the vicinity of the project site would remain unchanged under project conditions. There are currently no bike lanes along Meridian Avenue in the vicinity of the project site. However, there are bike lanes provided along Southwest Expressway and Willow Street, less than  $\frac{1}{2}$  mile from the project site.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

### Class II bike lanes are planned for:

Fruitdale Avenue, between Southwest Expressway and Race Street



Race Street, between Fruitdale Avenue and Parkmoor Avenue

### **Transit Services**

The project site is adequately served by the existing VTA transit services. The project site is primarily served by three VTA bus routes: Frequent Bus Route 25, Local Bus Route 64B, and Express Bus Route 103. Additionally, the Fruitdale LRT Station is located within 1/3 of a mile from the project site at the southwest corner of the intersection of Southwest Expressway and Fruitdale Avenue. LRT service at the Fruitdale LRT Station is provided by the Mountain View-Winchester LRT line. The Mountain View-Winchester LRT line provides access to the Diridon Transit Center, located approximately two miles north of the project site. Connections between local and regional bus routes, light rail lines, and commuter rail lines are provided within the Diridon Transit Center. The new transit trips generated by the project are not expected to create demand in excess of the transit service that is currently provided.

### Freeway Off-Ramp Analysis

### Race Street and I-280 Northbound Off-Ramp

The intersection Race Street and I-280 Northbound Off-Ramp is a one-way stop-controlled intersection. A westbound left-turn queue of approximately two and four vehicles are estimated to form during the AM and PM peak hours, respectively, at this off-ramp. The existing 400-foot storage length of the left-turn lane can accommodate the estimated queues. The addition of approved trips and project traffic increases the critical delay of the westbound left-turn movement. However, the westbound left-turn queue is not expected to increase during the AM and PM peak hours. Signal warrant analysis also indicates that traffic volumes at this stop-controlled intersection will not exceed the thresholds that warrant signalization under any of the study scenarios.

### Meridian Avenue and I-280 Southbound Off-Ramp

The I-280 southbound off-ramp at Meridian Avenue is an uncontrolled free-way off-ramp. During the PM peak hour, the southbound queue at Meridian Avenue and Fruitdale Avenue intersection was observed to extend back to the I-280 southbound off-ramp. The queue on Meridian Avenue causes vehicles from the off-ramp to form a short queue (maximum of two vehicles) on the off-ramp as they merge.

Based on the project trip assignment, the project will add approximately 5 and 16 trips from the offramp onto Meridian Avenue during the AM and PM peak-hour, respectively. Given that the ramp currently exhibits only minor queuing, it can be expected that the small number of additional project trips will not significantly worsen the existing queue.

### **Trip Reduction (TDM Program)**

The project is proposing a 29% reduction in required off-street parking. A 20% reduction can be granted for the project located within an Urban Village. In order to be granted an additional 9% reduction in required off-street parking, the project will be required to establish a TDM program that will reduce the parking demand for the proposed residential units. The TDM program should encourage multimodal travel and use of the extensive bus service and pedestrian/bicycle facilities in the immediate project area to the maximum extent possible. The applicant/property owner should manage the TDM program to ensure tenant participation. The project will be required to submit and have approved by the City its TDM program.



# 961-971 Meridian Avenue Mixed-Use Development TA Technical Appendices

# **Appendix A**San Jose VMT Evaluation Tool Output Sheet

# **CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT**

### **PROJECT:**

Name: 961-971 Meridian Avenue Affordable Residential Tool Version: 2/29/2019 Location: 961-971 Meridian Avenue, San Jose, CA Date: 8/29/2019

Parcel: 28403015 Parcel Type: Suburb with Multifamily Housing

Proposed Parking Spaces Vehicles: 290 Bicycles: 63

### **LAND USE:**

Residential: Percent of All Residential Units Single Family 0 DU Extremely Low Income ( < 30% MFI) 0 % Affordable Multi Family Very Low Income ( > 30% MFI, < 50% MFI) 0 % Affordable 233 DU Subtotal 233 DU Low Income ( > 50% MFI, ≤ 80% MFI) 100 % Affordable Office: 0 KSF Retail: 1.78 KSF Industrial: 0 KSF

### **VMT REDUCTION STRATEGIES**

### **Tier 1 - Project Characteristics**

Increase Residential Density Existing Density (DU/Residential Acres in half-mile buffer)	11 12
Increase Development Diversity Existing Activity Mix Index	0.42 0.40
Integrate Affordable and Below Market Rate  Extremely Low Income BMR units	0 % 0 % 100 %
Increase Employment Density Existing Density (Jobs/Commercial Acres in half-mile buffer)	14 14

### **Tier 2 - Multimodal Infrastructure**

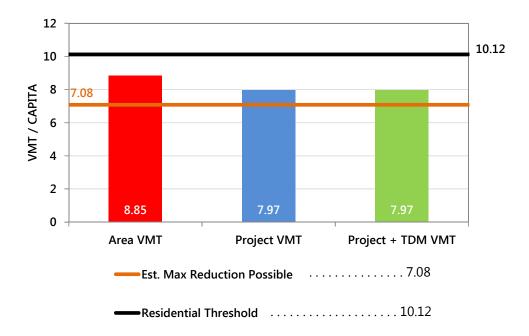
### Tier 3 - Parking

### **Tier 4 - TDM Programs**

# CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

### **RESIDENTIAL ONLY**

The tool estimates that the project would generate per capita VMT below the City's threshold.



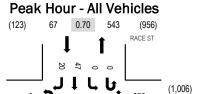
# **Appendix B Traffic Counts**

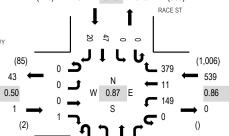


Location: 1 RACE ST & I280 NB OFF RAMP AM

Date: Wednesday, May 22, 2019 Peak Hour: 07:30 AM - 08:30 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

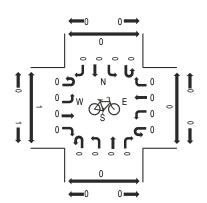




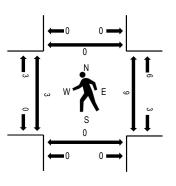
1280 NB OFF RAMP

(292)

# Peak Hour - Bicycles



#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

0.94

197

#### **Traffic Counts**

(382)

RACE ST

			DV	۷Y		1280	NB OF	F RAM	Р		RACE	ST			RACE	ST							
	Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	lestriar	n Crossir	ngs
	Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru F	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
_	7:00 AM	0	0	0	0	0	30	1	71	0	0	26	0	0	0	9	0	137	675	1	0	0	0
	7:15 AM	0	0	0	0	0	36	0	95	0	0	31	0	0	0	4	1	167	763	1	1	0	0
	7:30 AM	0	0	0	0	0	25	1	91	0	2	40	0	0	0	7	1	167	783	0	1	0	0
	7:45 AM	0	0	0	1	0	48	3	82	0	3	44	0	0	0	15	8	204	771	0	4	0	0
	8:00 AM	0	0	0	0	0	36	3	118	0	4	43	0	0	0	14	7	225	748	2	2	0	0
	8:15 AM	0	0	0	0	0	40	4	88	0	3	37	0	0	0	11	4	187		1	2	0	0
	8:30 AM	0	0	0	1	0	32	6	71	0	3	28	0	0	0	10	4	155		3	3	0	0
	8:45 AM	0	0	0	0	0	52	4	69	0	6	22	0	0	0	11	17	181		2	0	0	0

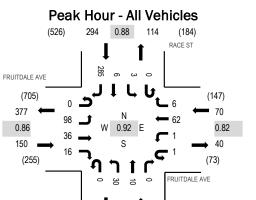
		East	bound			West	oound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	1	0	146	11	367	0	12	163	0	0	0	47	20	767
Mediums	0	0	0	0	0	3	0	10	0	0	1	0	0	0	0	0	14
Total	0	0	0	1	0	149	11	379	0	12	164	0	0	0	47	20	783



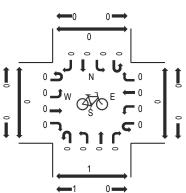
Location: 2 CHERRY AVE & FRUITDALE AVE AM

**Date:** Wednesday, May 22, 2019 **Peak Hour:** 07:30 AM - 08:30 AM

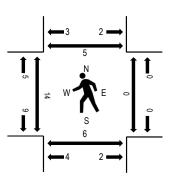
Peak 15-Minutes: 07:45 AM - 08:00 AM



# Peak Hour - Bicycles



#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

0.80

(77)

23

#### **Traffic Counts**

(43)

CHERRY AVE

	FR	RUITDA	ALE AV	Έ	FR	JITDA	LE AVE		(	HERR	Y AVE			RACI	ST							
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	lestriar	n Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	0	8	2	0	0	1	23	0	0	6	0	0	0	0	0	49	89	465	0	0	0	0
7:15 AM	0	9	6	1	0	1	15	1	0	3	0	0	0	0	0	63	99	514	0	0	0	1
7:30 AM	0	18	4	3	0	0	19	2	0	7	2	0	0	1	1	70	127	554	1	0	1	0
7:45 AM	0	21	13	4	0	0	16	1	0	9	2	0	0	1	1	82	150	546	1	0	1	1
8:00 AM	0	30	10	2	1	0	12	1	0	6	2	0	0	1	2	71	138	540	5	0	0	0
8:15 AM	0	29	9	7	0	1	15	2	0	8	4	0	0	0	2	62	139		7	0	4	4
8:30 AM	0	19	8	4	0	0	21	1	0	7	5	1	0	0	2	51	119		0	0	3	0
8:45 AM	0	26	15	7	0	1	13	0	0	13	1	1	0	0	3	64	144		0	0	0	1

		East	bound			Westh	oound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	97	36	16	1	1	61	6	0	30	10	0	0	3	6	281	548
Mediums	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3	5
Total	0	98	36	16	1	1	62	6	0	30	10	0	0	3	6	285	554

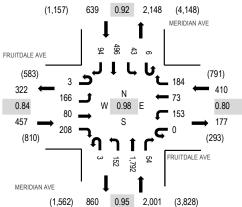


Location: 3 MERIDIAN AVE & FRUITDALE AVE AM

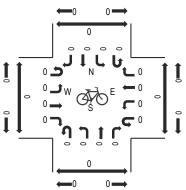
**Date:** Wednesday, May 22, 2019 **Peak Hour:** 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:15 AM - 08:30 AM

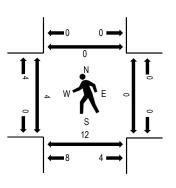
# Peak Hour - All Vehicles [1,157] 639 0.92 2,148 (4,148)



## Peak Hour - Bicycles



#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

#### **Traffic Counts**

	Interval	FF		ALE AV	Æ			LE AVE		M		N AVE				AN AVE				Dod	la atria v	Crossi	
	Interval Start Time	U-Turn	Eastb Left		Right	U-Turn	Westb Left	Thru I	Riaht	U-Turn	Northb Left		Right	U-Turn	Southb Left	Thru	Right		Rolling Hour	West		n Crossir South	
-	7:00 AM	2	30	16	27	0	27	18	43	1	24	355	1	0	4	64	18	630	3,119	0	1	3	1
	7:15 AM	0	27	6	30	0	44	12	49	0	26	486	2	0	8	115	17	822	3,360	0	0	3	0
	7:30 AM	0	42	15	49	0	24	14	51	0	30	426	11	1	8	86	21	778	3,431	0	2	3	0
	7:45 AM	1	49	15	46	0	46	21	64	0	37	435	13	1	8	132	21	889	3,507	0	0	2	0
	8:00 AM	0	37	21	49	0	41	12	36	1	43	463	18	2	8	118	22	871	3,467	4	0	5	0
	8:15 AM	2	42	30	64	0	38	24	47	2	31	421	15	2	16	132	27	893		0	0	3	0
	8:30 AM	0	38	14	49	0	28	16	37	0	41	473	8	1	11	114	24	854		0	0	2	0
	8:45 AM	0	37	17	55	0	44	19	36	0	31	417	17	0	11	136	29	849		0	0	2	0

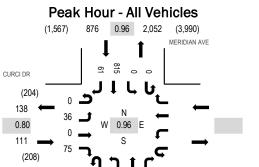
		East	bound			Westh	oound			North	oound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	1	0	0	0	0	0	0	0	0	3	0	0	0	3	1	8
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	3	163	78	197	0	149	72	183	3	146	1,779	54	6	43	480	91	3,447
Mediums	0	2	2	11	0	4	1	1	0	6	10	0	0	0	13	2	52
Total	3	166	80	208	٥	153	73	184	3	152	1 792	54	6	43	496	94	3 507



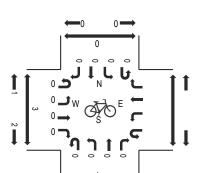
Location: 4 MERIDIAN AVE & CURCI DR AM

**Date:** Wednesday, May 22, 2019 **Peak Hour:** 07:45 AM - 08:45 AM

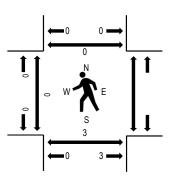
Peak 15-Minutes: 07:45 AM - 08:00 AM



## Peak Hour - Bicycles



#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

0.94 2,093

(4,028)

890

#### **Traffic Counts**

(1,609)

MERIDIAN AVE

			CURC	CLDR				N	1ERIDIA	N AVE		N	IERIDI/	AN AVE	Ξ						
	Interval		Eastb	ound		Westb	oound		Northb	ound			South	oound			Rolling	Ped	destriar	n Crossi	ngs
	Start Time	U-Turn	Left	Thru	Right	U-Turn Left	Thru Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
-	7:00 AM	0	11	0	7			0	7	402	0	0	0	116	4	547	2,805	1		5	0
	7:15 AM	0	4	0	19			1	1	534	0	0	0	183	7	749	2,999	0		2	0
	7:30 AM	0	12	0	23			0	11	507	0	0	0	143	8	704	3,020	1		2	0
	7:45 AM	0	7	0	14			0	18	543	0	0	0	211	12	805	3,080	0		1	0
	8:00 AM	0	7	0	19			0	19	481	0	0	0	202	13	741	2,998	0		0	0
	8:15 AM	0	11	0	26			0	24	483	0	0	0	201	25	770		0		1	0
	8:30 AM	0	11	0	16			0	16	509	0	0	0	201	11	764		0		1	0
	8:45 AM	0	8	0	13			0	12	460	0	0	0	214	16	723		1		0	0

	Eastbound					West	bound			North	oound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0					0	0	1	0	0	0	2	0	3
Bicycles on Road	0	0	0	0					0	0	0	0	0	0	0	0	0
Lights	0	36	0	74					0	76	1,991	0	0	0	781	61	3,019
Mediums	0	0	0	1					0	1	24	0	0	0	32	0	58
Total	0	36	0	75					0	77	2,016	0	0	0	815	61	3,080



Peak Hour - All Vehicles

1 140 592 436

W 0.95 E

50

951

1,169 0.94 1,074 (1,925)

SOUTHWEST EXPY

(603)

(554)

FRUITDALE AVE

(1,699)

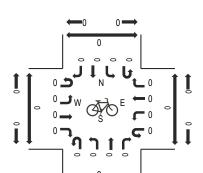
0.85

Location: 5 SOUTHWEST EXPY & FRUITDALE AVE AM

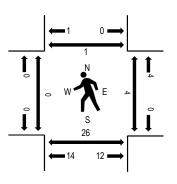
**Date:** Wednesday, May 22, 2019 **Peak Hour:** 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:15 AM - 08:30 AM

## Peak Hour - Bicycles



#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

0.97

#### **Traffic Counts**

FRUITDALE AVE (1,318)

667

0.82

273

(444)

SOUTHWEST EXPY

(1,171) 641

		FR	RUITDA	ALE AV	Έ	FR	UITDA	LE AVE		SOL	JTHWE	ST EXI	PΥ	SOL	JTHWE	ST EX	PY						
	Interval		Eastb	ound			Westb	ound			Northb	ound			Southl	oound			Rolling	Ped	lestriar	n Crossi	ngs
	Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
-	7:00 AM	0	22	6	0	0	13	47	13	0	3	153	5	1	22	99	105	489	2,335	0	0	4	0
	7:15 AM	0	25	11	4	0	3	43	12	0	1	189	5	0	34	121	127	575	2,552	0	1	2	1
	7:30 AM	0	31	16	1	0	10	52	4	0	5	196	7	0	33	120	119	594	2,687	0	0	4	0
	7:45 AM	0	28	26	0	0	15	66	12	1	2	227	8	0	34	131	127	677	2,711	0	3	8	1
	8:00 AM	0	39	37	0	0	13	47	12	0	3	224	18	0	33	177	103	706	2,633	0	1	7	0
	8:15 AM	0	38	45	1	0	11	57	13	0	2	228	12	0	38	162	103	710		0	0	5	0
	8:30 AM	0	28	31	0	0	8	49	15	0	5	209	12	1	35	122	103	618		0	0	6	0
	8·45 AM	0	21	30	4	0	10	63	15	1	3	169	11	0	45	144	83	599		0	0	6	0

	Eastbound						ound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	1	0	0	0	0	0	0	0	0	2	1	0	0	1	0	5
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	128	129	1	0	47	209	51	1	12	858	46	1	134	578	431	2,626
Mediums	0	4	10	0	0	0	10	1	0	0	28	3	0	6	13	5	80
Total	0	133	139	1	0	47	219	52	1	12	888	50	1	140	592	436	2,711

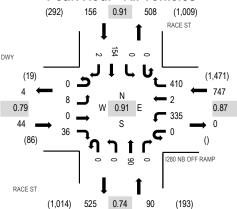


Location: 1 RACE ST & I280 NB OFF RAMP PM

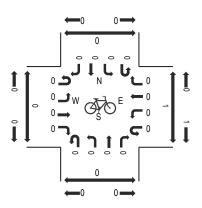
Date: Wednesday, May 22, 2019 Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:45 PM - 06:00 PM

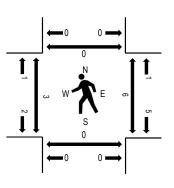




## Peak Hour - Bicycles



#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

#### **Traffic Counts**

		DV	۷Y		1280	NB OF	F RAM	Р		RACE	ST			RACI	ST							
Interval		Eastb	ound			Westb	ound			Northb	ound			Southl	ound			Rolling	Ped	destriar	n Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru f	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	3	0	6	0	80	4	106	0	0	19	0	0	0	28	4	250	1,005	3	1	0	0
4:15 PM	0	0	0	5	0	96	1	105	0	0	27	0	0	0	31	3	268	1,006	3	1	0	0
4:30 PM	0	3	0	14	0	77	1	72	0	0	35	0	0	0	31	1	234	989	1	1	0	0
4:45 PM	0	3	0	8	0	76	0	106	0	0	22	0	0	0	37	1	253	1,006	1	0	0	0
5:00 PM	0	3	0	12	0	74	2	103	0	0	18	0	0	0	38	1	251	1,037	1	1	0	0
5:15 PM	0	2	0	9	0	79	0	89	0	0	28	0	0	0	44	0	251		0	0	0	0
5:30 PM	0	1	0	5	0	86	0	99	0	0	20	0	0	0	40	0	251		2	2	0	0
5:45 PM	0	2	0	10	0	96	0	119	0	0	24	0	0	0	32	1	284		0	3	0	0

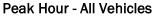
		East	bound			West	oound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	8	0	36	0	334	2	404	0	0	89	0	0	0	153	2	1,028
Mediums	0	0	0	0	0	0	0	6	0	0	1	0	0	0	1	0	8
Total	0	8	0	36	0	335	2	410	0	0	90	0	0	0	154	2	1,037

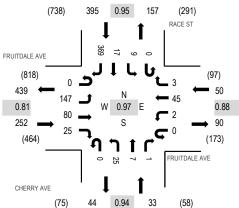


Location: 2 CHERRY AVE & FRUITDALE AVE PM

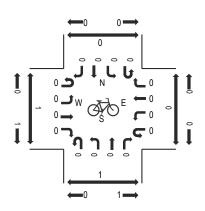
**Date:** Wednesday, May 22, 2019 **Peak Hour:** 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

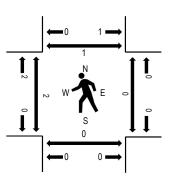




## Peak Hour - Bicycles



#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

#### **Traffic Counts**

	Interval	FR	RUITD <i>A</i> Eastb	ALE AV	Έ		UITDA Westb	LE AVE		(	HERR'				RACE					Dod	la atria v	Crossi	222
	Start Time	U-Turn			Diaht				Diaht	II Turn			Diaht	II Turn	Left		Diaht		Rolling Hour	West		Crossi South	
_	Otart Timo	U-Turn	Left	Thru	Right	U-Turn	Leit	IIIIU F	Rigni	U-Turn	Left	Iniu	Rigiii	U-Turn	Leit	Thru	Right	TOtal	Houl	vvest	Lasi	Journ	NOILII
	4:00 PM	0	24	15	5	0	1	8	3	0	2	0	1	0	1	4	79	143	627	3	0	0	0
	4:15 PM	0	39	19	4	0	0	7	2	0	6	2	3	0	0	2	83	167	657	1	0	3	0
	4:30 PM	1	27	16	8	0	0	13	2	0	3	1	0	0	5	1	86	163	678	1	0	1	1
	4:45 PM	0	29	21	4	0	0	8	3	0	5	2	0	0	2	2	78	154	700	0	0	1	1
	5:00 PM	0	32	16	6	0	0	14	0	0	8	1	0	0	4	5	87	173	730	0	0	0	0
	5:15 PM	0	33	23	5	0	1	14	1	0	4	4	1	0	4	3	95	188		0	0	0	0
	5:30 PM	0	39	16	4	0	0	11	2	0	8	1	0	0	1	3	100	185		0	0	0	0
	5:45 PM	0	43	25	10	0	1	6	0	0	5	1	0	0	0	6	87	184		2	0	0	1

		East	bound			West	oound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	147	80	25	0	2	45	3	0	25	7	1	0	9	17	367	728
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	147	80	25	0	2	45	3	0	25	7	1	0	9	17	369	730

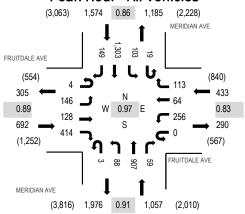


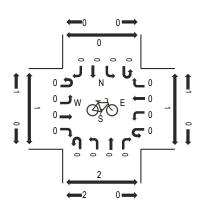
Location: 3 MERIDIAN AVE & FRUITDALE AVE PM

**Date:** Wednesday, May 22, 2019 **Peak Hour:** 05:00 PM - 06:00 PM

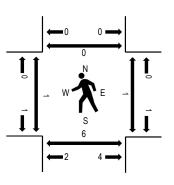
Peak 15-Minutes: 05:15 PM - 05:30 PM







#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

#### **Traffic Counts**

	Interval		UITDA Eastb	ALE AV	Έ		UITDA Westb	LE AVE ound		M	ERIDIA Northb			N	ERIDIA South	AN AVE			Rolling	Ped	estriar	n Crossi	ngs
	Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru F	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
_	4:00 PM	0	26	26	82	1	46	12	28	1	20	180	11	2	21	322	21	799	3,409	0	4	2	0
	4:15 PM	0	29	30	68	0	68	18	33	2	19	207	16	1	29	307	24	851	3,509	1	0	5	0
	4:30 PM	0	30	24	86	0	67	9	25	0	22	227	18	5	25	334	36	908	3,628	0	3	2	0
	4:45 PM	1	39	36	83	0	71	13	16	0	22	194	14	1	26	303	32	851	3,674	1	1	2	1
	5:00 PM	0	38	29	95	0	55	15	31	0	24	248	9	5	30	289	31	899	3,756	0	0	2	0
	5:15 PM	1	44	33	110	0	67	17	29	1	25	253	15	9	18	307	41	970		0	0	0	0
	5:30 PM	1	39	39	120	0	83	23	30	2	24	190	14	5	27	322	35	954		0	1	2	0
	5:45 PM	2	25	27	89	0	51	9	23	0	15	216	21	0	28	385	42	933		1	0	2	0

			West	ound			Northb	ound			South	hbound					
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	1	0	1	0	0	0	0	2	0	0	0	0	0	4
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	4	146	128	406	0	254	64	113	3	82	894	58	19	103	1,300	146	3,720
Mediums	0	0	0	7	0	1	0	0	0	6	11	1	0	0	3	3	32
Total	4	146	128	414	0	256	64	113	3	88	907	59	19	103	1,303	149	3,756

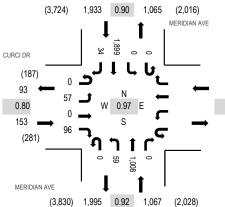


Location: 4 MERIDIAN AVE & CURCI DR PM

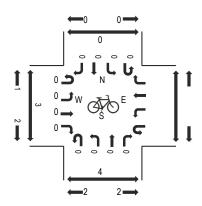
**Date:** Wednesday, May 22, 2019 **Peak Hour:** 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

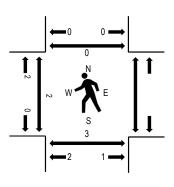
#### Peak Hour - All Vehicles



#### Peak Hour - Bicycles



#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

#### **Traffic Counts**

		CURC	CIDR				M	ERIDIA	N AVE		M	ERIDI/	AN AVE							
Interval		Eastb	ound		Westb	ound		Northb	ound			Southl	oound			Rolling	Ped	destriar	n Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn Left	Thru Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	4	0	19			0	10	221	0	0	0	414	9	677	2,880	5		3	0
4:15 PM	0	11	0	21			0	10	221	0	0	0	443	10	716	2,963	0		0	0
4:30 PM	0	9	0	26			0	12	261	0	0	0	450	15	773	3,063	1		1	0
4:45 PM	0	14	0	24			0	16	210	0	0	0	438	12	714	3,054	0		0	0
5:00 PM	0	21	0	30			0	16	277	0	0	0	409	7	760	3,153	0		1	0
5:15 PM	0	12	0	24			0	12	276	0	0	0	485	7	816		1		1	0
5:30 PM	0	13	0	25			0	13	223	0	0	0	480	10	764		0		0	0
5:45 PM	0	11	0	17			0	18	232	0	0	0	525	10	813		1		1	0

		East	W	estbour/	nd			North	oound			Sout	hbound				
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn L	eft Th	ıru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0					0	0	2	0	0	0	2	0	4
Bicycles on Road	0	0	0	0					0	0	0	0	0	0	0	0	0
Lights	0	57	0	95					0	59	988	0	0	0	1,888	34	3,121
Mediums	0	0	0	1					0	0	18	0	0	0	9	0	28
Total	0	57	0	96					0	59	1,008	0	0	0	1,899	34	3,153

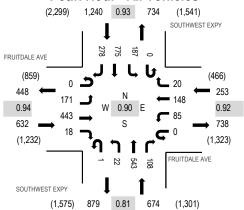


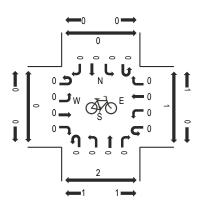
Location: 5 SOUTHWEST EXPY & FRUITDALE AVE PM

**Date:** Wednesday, May 22, 2019 **Peak Hour:** 05:00 PM - 06:00 PM

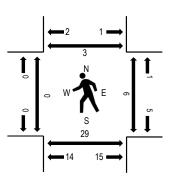
Peak 15-Minutes: 05:15 PM - 05:30 PM







#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

#### **Traffic Counts**

		FRUITDALE AVE Eastbound				FR	UITDA	LE AVE		SOL	JTHWE	STEX	PY	SOL	JTHWE	EST EX	PY						
Interva	al		Eastb	ound			Westb	ound			Northb	ound			South	bound			Rolling	Ped	lestriar	n Crossi	ings
Start Ti	ne	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 P	M	0	77	84	4	0	18	37	9	0	5	135	12	0	48	142	60	631	2,499	0	0	2	0
4:15 P	M	0	46	73	5	0	18	32	5	1	1	114	13	0	37	162	72	579	2,519	0	0	5	1
4:30 P	M	0	78	87	3	0	16	32	2	0	7	140	23	0	48	153	74	663	2,716	0	4	4	1
4:45 P	M	0	50	92	1	0	14	26	4	0	4	147	25	0	43	159	61	626	2,760	0	0	7	1
5:00 P	M	0	58	111	3	0	24	34	10	0	5	102	18	0	39	174	73	651	2,799	0	2	3	2
5:15 P	M	0	48	110	5	0	20	40	5	0	6	172	38	0	46	207	79	776		0	3	3	0
5:30 P	M	0	30	131	6	0	26	42	1	0	8	144	29	0	52	178	60	707		0	1	16	1
5:45 P	M	0	35	91	4	0	15	32	4	1	3	125	23	0	50	216	66	665		0	0	7	0

		East	bound			Westh	oound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	171	437	18	0	84	142	18	1	22	537	108	0	185	770	274	2,767
Mediums	0	0	6	0	0	1	6	2	0	0	6	0	0	1	5	4	31
Total	0	171	443	18	0	85	148	20	1	22	543	108	0	187	775	278	2 799

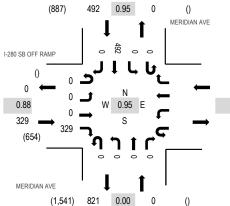


Location: 1 MERIDIAN AVE & I-280 SB OFF RAMP AM

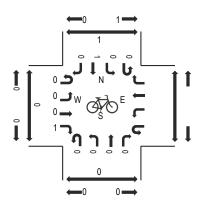
**Date:** Tuesday, August 27, 2019 **Peak Hour:** 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

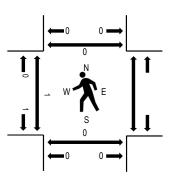




## Peak Hour - Bicycles



#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

#### **Traffic Counts - Motorized Vehicles**

	1-28	O SB C	FF RA	MP			M	ERIDIA	N AVE		N	1ERIDIA	AN AVE							
Interval		Eastb	ound		Westb	ound		Northb	ound			South	ound			Rolling	Ped	lestriar	n Crossii	ngs
 Start Time	U-Turn	Left	Thru	Right	U-Turn Left	Thru Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	0	0	0	60			0	0	0	0	0	0	79	0	139	747	0		0	0
7:15 AM	0	0	0	82			0	0	0	0	0	0	119	0	201	821	1		0	0
7:30 AM	0	0	0	62			0	0	0	0	0	0	129	0	191	821	0		0	0
7:45 AM	0	0	0	86			0	0	0	0	0	0	130	0	216	809	0		0	0
8:00 AM	0	0	0	99			0	0	0	0	0	0	114	0	213	794	0		0	0
8:15 AM	0	0	0	87			0	0	0	0	0	0	114	0	201		0		0	0
8:30 AM	0	0	0	75			0	0	0	0	0	0	104	0	179		0		0	0
8:45 AM	0	0	0	103			0	0	0	0	0	0	98	0	201		0		0	0

		Eastbound					bound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	1					0	0	0	0	0	0	3	0	4
Lights	0	0	0	315					0	0	0	0	0	0	480	0	795
Mediums	0	0	0	13					0	0	0	0	0	0	9	0	22
Total	0	0	0	329					0	0	0	0	0	0	492	0	821

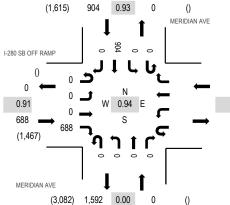


Location: 1 MERIDIAN AVE & I-280 SB OFF RAMP PM

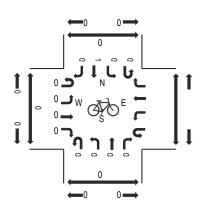
**Date:** Tuesday, August 27, 2019 **Peak Hour:** 05:00 PM - 06:00 PM

**Peak 15-Minutes:** 05:00 PM - 05:15 PM

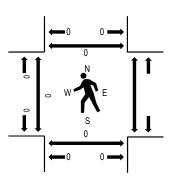
# Peak Hour - Motorized Vehicles



#### Peak Hour - Bicycles



#### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

#### **Traffic Counts - Motorized Vehicles**

	1-28	OSB C	FF RA	MP			N	IERIDIA	AN AVE		N	IERIDI	AN AVE	Ē						
Interval		Eastb	ound		Westb	ound		Northb	ound			South	bound			Rolling	Ped	destria	n Crossi	ings
Start Time	U-Turn	Left	Thru	Right	U-Turn Left	Thru Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	0	0	214			0	0	0	0	0	0	170	0	384	1,490	0		0	0
4:15 PM	0	0	0	193			0	0	0	0	0	0	157	0	350	1,531	0		0	0
4:30 PM	0	0	0	192			0	0	0	0	0	0	215	0	407	1,563	0		0	0
4:45 PM	0	0	0	180			0	0	0	0	0	0	169	0	349	1,572	0		0	0
5:00 PM	0	0	0	203			0	0	0	0	0	0	222	0	425	1,592	0		0	0
5:15 PM	0	0	0	166			0	0	0	0	0	0	216	0	382		0		0	0
5:30 PM	0	0	0	172			0	0	0	0	0	0	244	0	416		0		0	0
5:45 PM	0	0	0	147			0	0	0	0	0	0	222	0	369		0		0	0

		East	bound			West	bound			North	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0					0	0	0	0	0	0	2	0	2
Lights	0	0	0	685					0	0	0	0	0	0	898	0	1,583
Mediums	0	0	0	3					0	0	0	0	0	0	4	0	7
Total	0	0	0	688					0	0	0	0	0	0	904	0	1,592

# Appendix C Approved Trips Inventory

AM PROJECT TRIPS

Intersection of	:	Fruitdale	Αv	&	Meridian	Αv	
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Traffix Node Number: 3552

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
DOWNTOWN LEGACY DOWNTOWN CORE DOWNTOWN STRATEGY PLAN 2000	3	39	1	0	8	0	3	1	3	2	1	2
PDC89-09-121 (3-08149) Residential LABARBERA & SOUTHWEST EXP (SE/C) 95 SFA	2	0	0	0	0	0	14	0	2	0	0	0

TOTAL: 5 39 1 0 8 0 17 1 5 2 1 2

	LEFT	THRU	RIGHT	
NORTH	0	8	0	

EAST 2 1 2
SOUTH 5 39 1
WEST 17 1 5

PM PROJECT TRIPS

Intersection of : Fruitdale Av & Meridian Av

**Traffix Node Number:** 3552

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
DOWNTOWN LEGACY DOWNTOWN CORE DOWNTOWN STRATEGY PLAN 2000	5	31	1	5	60	5	4	4	12	12	3	3
PDC89-09-121 (3-08149) Residential LABARBERA & SOUTHWEST EXP (SE/C) 95 SFA	2	0	0	0	0	14	0	0	2	0	0	0

TOTAL:	7	31	1	5	60	19	4	4	14	12	3	3

	LEFT	THRU	RIGHT
NORTH	5	60	19
EAST	12	3	3
SOUTH	7	31	1
WEST	4	4	14

AM PROJECT TRIPS

Intersection of : Fruitdale Av & Southewst Ex & Southwest Ex

**Traffix Node Number:** 3553

M09 M08 M07 M03 M02 M01 M12 M11 M10 M06 M05 M04 Permit No./Proposed Land NBL NBT NBR SBL SBT SBR EBL EBT EBR WBL WBT WBR Use/Description/Location PDC89-09-121 (3-08149) 0 0 Ω 0 0 1 0 0 12 16 14

FDC09-09-121 (3-00149)

Residential

LABARBERA & SOUTHWEST EXP (SE/C)

95 SFA

TOTAL: 2 12 16 0 14 0 0 0 0 1 0 0

	LEFT	THRU	RIGHT
NORTH	0	14	0
EAST	1	0	0
SOUTH	2	12	16
WEST	0	0	0

PM PROJECT TRIPS 07/01/2019

Intersection of : Fruitdale Av & Southewst Ex & Southwest Ex

Traffix Node Number: 3553

M09 M08 M07 M03 M02 M01 M12 M11 M10 M06 M05 M04 Permit No./Proposed Land NBL NBT NBR SBL SBT SBR EBL EBT EBR WBL WBT WBR Use/Description/Location PDC89-09-121 (3-08149) 1 0 12 0 Ω 0 2 16 0 0 Ω 14

Residential

LABARBERA & SOUTHWEST EXP (SE/C)

95 SFA

0 TOTAL: 0 14 1 12 0 0 0 2 16 0 0

	LEFT	THRU	RIGHT
NORTH	0	12	0
EAST	16	0	0
SOUTH	0	14	1
WEST	$\cap$	0	2

AM PROJECT TRIPS

Intersection of : Curci Dr & Meridian Av

Traffix Node Number: 3881

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
CP15-067 (3-18719) Retail/Commercial 979 MERIDIAN AVENUNE SJ MONTESSORI	5	0	0	0	0	7	11	0	2	0	0	0
PDC14-072 (3-11676) LEGACY 1197 LICK AVENUE TAMIEN STATION TOD	5	0	0	0	0	7	11	0	2	0	0	0

	LEFT	THRU	RIGHT	
NORTH	0	0	14	
EAST	Ο	Ο	Ο	

TOTAL:

EAST 0 0 0 0 0 SOUTH 10 0 0 WEST 22 0 4

PM PROJECT TRIPS

Intersection of : Curci Dr & Meridian Av

Traffix Node Number: 3881

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
CP15-067 (3-18719) Retail/Commercial 979 MERIDIAN AVENUNE SJ MONTESSORI	2	0	0	0	0	12	7	0	5	0	0	0
PDC14-072 (3-11676) LEGACY 1197 LICK AVENUE TAMIEN STATION TOD	2	0	0	0	0	12	7	0	5	0	0	0

	LEFT	THRU	RIGHT
NORTH	0	0	24
EAST	0	0	0
SOUTH	4	0	0

14 0 10

TOTAL:

WEST

# **Appendix D Volume Summary**

961-971 Meridian Ave AM Peak-Hour

Intersection Number: 1
Traffix Node Number: 200

Intersection Name: Race Street and I-280 NB Off-Ramp (unsignalized)

Peak Hour: AM
Count Date: 5/22/19

					M	ovements	S						
_	No	rth Appro	oach	Eas	t Appro	oach	Sou	th Appr	oach	Wes	st Appro	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	20	47	0	379	0	160	0	176	0	1	0	0	783
ATI	0	5	0	0	0	0	0	2	0	0	0	0	7
919 Meridian	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	5	0	0	0	0	0	2	0	0	0	0	7
Background Conditions	20	52	0	379	0	160	0	178	0	1	0	0	790
Proposed Project Trips	0	1	0	0	0	3	0	3	0	0	0	0	7
Background Plus Project Conditions	20	53	0	379	0	163	0	181	0	1	0	0	797

Intersection Number: 2
Traffix Node Number: 300

Intersection Name: Race Street/Cherry Avenue and Fruitdale Avenue (unsignalized)

Peak Hour: AM
Count Date: 5/22/19

					M	ovement	S						
	Nor	th Appr	oach	Eas	st Appro	ach	Sou	th Appr	oach	Wes	st Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	285	6	3	6	62	2	0	10	30	16	36	98	554
ATI	5	0	0	0	0	0	0	0	0	0	0	2	7
919 Meridian	5	0	0	0	0	0	0	0	0	0	0	0	5
Total Approved Trips	10	0	0	0	0	0	0	0	0	0	0	2	12
Background Conditions	295	6	3	6	62	2	0	10	30	16	36	100	566
Proposed Project Trips	4	0	0	0	0	0	0	0	0	0	0	3	7
Background Plus Project Conditions	299	6	3	6	62	2	0	10	30	16	36	103	573

Intersection Number: 3
Traffix Node Number: 3552

Intersection Name: Meridian Avenue and Fruitdale Avenue

Peak Hour: AM
Count Date: 5/22/19

					М	ovements	5						
_	No	rth Appro	oach	Eas	t Appro	ach	Sou	uth Appro	oach	Wes	st Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	94	496	49	184	73	153	54	1792	155	208	80	169	3507
ATI	0	8	0	2	1	2	1	39	5	5	1	17	81
919 Meridian	0	10	0	0	0	5	0	6	5	28	0	0	54
Total Approved Trips	0	18	0	2	1	7	1	45	10	33	1	17	135
Background Conditions	94	514	49	186	74	160	55	1837	165	241	81	186	3642
Proposed Project Trips	0	6	0	0	0	4	3	36	5	6	0	0	60
Background Plus Project Conditions	94	520	49	186	74	164	58	1873	170	247	81	186	3702

961-971 Meridian Ave AM Peak-Hour

Intersection Number: 4
Traffix Node Number: 3881

Intersection Name: Meridian Avenue and Curci Drive

Peak Hour: AM
Count Date: 5/22/19

					М	ovement	s						
_	No	rth Appro	oach	Eas	st Appro	ach	Sou	uth Appro	oach	Wes	st Appre	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	61	815	0	0	0	0	0	2016	77	75	0	36	3080
ATI	14	0	0	0	0	0	0	0	10	4	0	22	50
919 Meridian	0	2	0	0	0	0	0	4	0	0	0	0	6
Total Approved Trips	14	2	0	0	0	0	0	4	10	4	0	22	56
Background Conditions	75	817	0	0	0	0	0	2020	87	79	0	58	3136
Proposed Project Trips	3	5	0	0	0	0	0	2	0	0	0	0	10
Background Plus Project Conditions	78	822	0	0	0	0	0	2022	87	79	0	58	3146

Intersection Number: 5
Traffix Node Number: 3553

Intersection Name: Southwest Expressway and Fruitdale Avenue

Peak Hour: AM
Count Date: 5/22/19

					M	ovement	S						
	No	rth Appro	oach	Eas	st Appro	ach	Sou	th Appro	oach	We	st Appro	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	436	592	141	52	219	47	50	888	13	1	139	133	2711
ATI	0	14	0	0	0	1	16	12	2	0	0	0	45
919 Meridian	0	0	10	0	2	3	10	0	0	0	8	0	33
Total Approved Trips	0	14	10	0	2	4	26	12	2	0	8	0	78
Background Conditions	436	606	151	52	221	51	76	900	15	1	147	133	2789
Proposed Project Trips	0	0	3	0	3	3	2	0	0	0	1	0	12
Background Plus Project Conditions	436	606	154	52	224	54	78	900	15	1	148	133	2801

Intersection Number: 6
Traffix Node Number: 15

Intersection Name: Meridian Avenue and I-280 SB Off-Ramp (unsignalized)

Peak Hour: AM
Count Date: 8/27/19

					M	ovement	S						
_	No	rth Appro	oach	Eas	t Appro	ach	Sou	th Appr	oach	Wes	t Appro	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	0	492	0	0	0	0	0	0	0	329	0	0	821
ATI	0	4	0	0	0	0	0	0	0	4	0	0	8
919 Meridian	0	0	0	0	0	0	0	0	0	10	0	0	10
Total Approved Trips	0	4	0	0	0	0	0	0	0	14	0	0	18
Background Conditions	0	496	0	0	0	0	0	0	0	343	0	0	839
Proposed Project Trips	0	1	0	0	0	0	18	18	0	5	0	0	42
Background Plus Project Conditions	0	497	0	0	0	0	18	18	0	348	0	0	881

961-971 Meridian Ave PM Peak-Hour

Intersection Number: 1
Traffix Node Number: 200

Intersection Name: Race Street and I-280 NB Off-Ramp (unsignalized)

Peak Hour: PM Count Date: 5/22/19

					M	ovements	3						
_	No	rth Appro	oach	Eas	t Appro	oach	Sou	th Appr	oach	Wes	st Appro	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	2	154	0	410	0	337	0	90	0	44	0	0	1037
ATI	0	18	0	0	0	0	0	5	0	0	0	0	23
919 Meridian	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	18	0	0	0	0	0	5	0	0	0	0	23
Background Conditions	2	172	0	410	0	337	0	95	0	44	0	0	1060
Proposed Project Trips	0	3	0	0	0	9	0	2	0	0	0	0	14
Background Plus Project Conditions	2	175	0	410	0	346	0	97	0	44	0	0	1074

Intersection Number: 2
Traffix Node Number: 300

Intersection Name: Race Street/Cherry Avenue and Fruitdale Avenue (unsignalized)

Peak Hour: PM Count Date: 5/22/19

					М	ovement	S						
	No	rth Appro	oach	Eas	st Appro	ach	Sou	th Appr	oach	Wes	st Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	369	17	9	3	45	2	1	7	25	25	80	147	730
ATI	18	0	0	0	0	0	0	0	0	0	0	5	23
919 Meridian	2	0	0	0	0	0	0	0	0	0	0	0	2
Total Approved Trips	20	0	0	0	0	0	0	0	0	0	0	5	25
Background Conditions	389	17	9	3	45	2	1	7	25	25	80	152	755
Proposed Project Trips	12	0	0	0	0	0	0	0	0	0	0	2	14
Background Plus Project Conditions	401	17	9	3	45	2	1	7	25	25	80	154	769

Intersection Number: 3
Traffix Node Number: 3552

Intersection Name: Meridian Avenue and Fruitdale Avenue

Peak Hour: PM Count Date: 5/22/19

					М	ovements	S						
_	No	rth Appro	ach	Eas	t Appro	oach	Sou	ıth Appr	oach	Wes	st Appro	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	149	1303	122	113	64	256	59	907	91	414	128	150	3756
ATI	19	60	5	3	3	12	1	31	7	14	4	4	163
919 Meridian	0	4	0	0	0	2	0	30	21	12	0	0	69
Total Approved Trips	19	64	5	3	3	14	1	61	28	26	4	4	232
Background Conditions	168	1367	127	116	67	270	60	968	119	440	132	154	3988
Proposed Project Trips	0	19	0	0	0	12	2	25	4	17	0	0	79
Background Plus Project Conditions	168	1386	127	116	67	282	62	993	123	457	132	154	4067

961-971 Meridian Ave PM Peak-Hour

Intersection Number: 4
Traffix Node Number: 3881

Intersection Name: Meridian Avenue and Curci Drive

Peak Hour: PM Count Date: 5/22/19

					М	ovement	S						
	No	orth Appro	ach	Eas	st Appro	ach	Sou	ıth Appro	oach	Wes	st Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	34	1899	0	0	0	0	0	1008	59	96	0	57	3153
ATI	24	0	0	0	0	0	0	0	4	10	0	14	52
919 Meridian	0	9	0	0	0	0	0	3	0	0	0	0	12
Total Approved Trips	24	9	0	0	0	0	0	3	4	10	0	14	64
Background Conditions	58	1908	0	0	0	0	0	1011	63	106	0	71	3217
Proposed Project Trips	2	4	0	0	0	0	0	5	0	0	0	0	11
Background Plus Project Conditions	60	1912	0	0	0	0	0	1016	63	106	0	71	3228

Intersection Number: 5
Traffix Node Number: 3553

Intersection Name: Southwest Expressway and Fruitdale Avenue

Peak Hour: PM Count Date: 5/22/19

					М	ovement	S						
<u> </u>	No	rth Appr	oach	Eas	st Appro	ach	Sou	th Appr	oach	We	st Appro	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	278	775	187	20	148	85	108	543	23	18	443	171	2799
ATI	0	12	0	0	0	16	1	14	0	2	0	0	45
919 Meridian	0	0	4	0	9	12	4	0	0	0	3	0	32
Total Approved Trips	0	12	4	0	9	28	5	14	0	2	3	0	77
Background Conditions	278	787	191	20	157	113	113	557	23	20	446	171	2876
Proposed Project Trips	0	0	9	0	2	2	5	0	0	0	3	0	21
Background Plus Project Conditions	278	787	200	20	159	115	118	557	23	20	449	171	2897

Intersection Number: 6
Traffix Node Number: 15

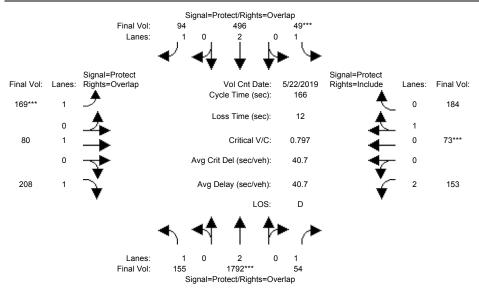
Intersection Name: Meridian Avenue and I-280 SB Off-Ramp (unsignalized)

Peak Hour: PM Count Date: 8/27/19

					М	ovement	S						
_	No	rth Appro	oach	Eas	t Appro	ach	Sou	th Appr	oach	Wes	st Appro	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	0	904	0	0	0	0	0	0	0	688	0	0	1592
ATI	0	42	0	0	0	0	0	0	0	42	0	0	84
919 Meridian	0	0	0	0	0	0	0	0	0	4	0	0	4
Total Approved Trips	0	42	0	0	0	0	0	0	0	46	0	0	88
Background Conditions	0	946	0	0	0	0	0	0	0	734	0	0	1680
Proposed Project Trips	0	3	0	0	0	0	12	12	0	16	0	0	43
Background Plus Project Conditions	0	949	0	0	0	0	12	12	0	750	0	0	1723

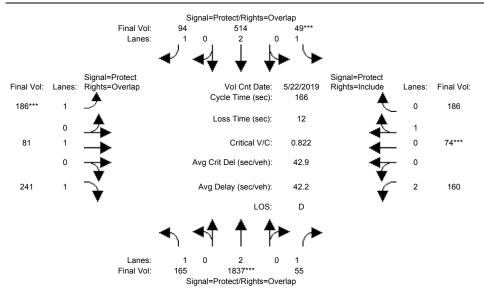
# **Appendix E**Intersection Level of Service Calculations

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (AM)



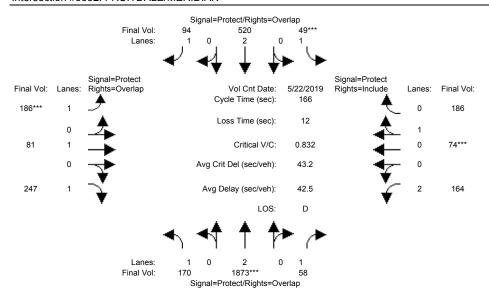
Movement:	L	- т	- R	South Bound L - T - R			L -	- T	- R	L - T - R			
		10			10			10			10		
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Volume Module	e: >>	Count				9 <<							
		1792		49		94			208			184	
Growth Adj:					1.00	1.00		1.00	1.00		1.00	1.00	
Initial Bse:				49		94	169	80	208	153	73	184	
Added Vol:				0			0		0	0	0	0	
ATI:				0				0	-	0	-	0	
Initial Fut:				49		94	169			153	73	184	
User Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00	
PHF Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00	
PHF Volume:			54	49	496	94	169	80	208	153	73	184	
Reduct Vol:			0		0	0	0	-	-	0	0	0	
Reduced Vol:	155	1792	54	49	496	94	169	80	208	153	73	184	
PCE Adj:	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:					496			80				184	
	1												
Saturation F													
		1900		1900		1900		1900	1900		1900	1900	
Adjustment:				0.92		0.92		1.00	0.92		0.95	0.95	
Lanes:				1.00		1.00		1.00	1.00		0.28	0.72	
Final Sat.:						1750		1900	1750		511	1289	
Capacity Ana	-			0 00	0 10	0 0 5	0 10	0 0 1	0 10	0 0 5	0 1 4	0 1 4	
Vol/Sat:								0.04	0.12		0.14	0.14	
Crit Moves:				****			****				****		
Green Time:						82.2		27.4	69.6		29.5	29.5	
Volume/Cap:				0.66		0.11		0.26	0.28		0.80	0.80	
Delay/Veh:			6.7	98.8		22.4		60.8	31.9		79.0	79.0	
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00	
AdjDel/Veh:				98.8		22.4		60.8	31.9		79.0	79.0	
LOS by Move:	D	С	A	F	D		F	E	C		Ε	Ε	
HCM2kAvgQ:				4		3			7	4	15	15	
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane						

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (AM)



Approach:	No	rth Bo	ound	South Bound			Εä	ast Bo	und			
Movement:			- R			- R					- T	
Min. Green:			10	7				10			10	10
Y+R:		4.0			4.0	4.0		4.0			4.0	4.0
Volume Module										4 = 0		
Base Vol:		1792	54	49		94	169		208	153	73	184
Growth Adj:					1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		1792	54	49	496	94	169	80	208	153	73	184
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	10	45	1	0	18	0	17	1	33	7		2
Initial Fut:			55	49		94	186	81	241	160	74	186
User Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume:			55	49	514	94	186	81	241	160	74	186
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			55	49	514	94	186	81	241	160	74	186
PCE Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
MLF Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
FinalVolume:			55	49		94	186	81	241	160	74	186
	1											
Saturation F.												
Sat/Lane:			1900		1900	1900		1900	1900		1900	1900
Adjustment:				0.92		0.92		1.00	0.92		0.95	0.95
Lanes:		2.00	1.00		2.00	1.00		1.00	1.00		0.28	0.72
Final Sat.:					3800	1750		1900	1750	3150		1288
Capacity Ana	-			0 00	0 1 4	0 05	0 11	0 04	0 1 4	0 0 5	0 14	0 14
Vol/Sat:		0.48	0.03	****	0.14	0.05	****	0.04	0.14	0.05	0.14	0.14
Crit Moves:		****	1100		61 0	00 4		0	60.0	00.0		00 0
Green Time:				7.0		82.4			69.9		28.9	28.9
Volume/Cap:			0.04		0.37	0.11		0.26	0.33		0.83	0.83
Delay/Veh:				98.8		22.3		61.0	32.5		82.8	82.8
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:						22.3		61.0	32.5		82.8	82.8
LOS by Move:			A	F	D	C	F	E	С	E	F	F
- J~ ·	7		1	4	9	3	11	-	9	5	16	16
Note: Queue	repor	ted is	s the n	umber	of ca	rs per	lane	•				

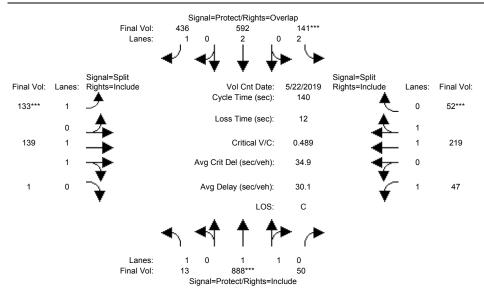
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background + P (AM)



Approach:	No	rth Bo	ound	Soi	ıth Bo	und	Εä	ast Bo	und			
Movement:			- R			- R					- T	
				•						•		
Min. Green:			10	7				10			10	10
Y+R:	4.0		4.0		4.0	4.0		4.0	4.0		4.0	4.0
Volume Module										4 = 0	= 0	
Base Vol:		1792	54	49		94	169		208	153	73	184
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		1792	54	49	496	94	169	80	208	153	73	184
Added Vol:	5		3	0	6	0	0	0	6	4	0	0
ATI:	10	45	1	0	18	0	17	1	33	7	1	2
Initial Fut:			58	49		94	186	81	247	164	74	186
User Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:	1.00		1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:			58	49	520	94	186	81	247	164	74	186
Reduct Vol:	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			58	49	520	94	186	81	247	164	74	186
PCE Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:			58	49		94	186	81	247	164	74	186
	1											
Saturation F												
Sat/Lane:		1900			1900	1900		1900	1900		1900	1900
_	0.92		0.92	0.92		0.92		1.00	0.92		0.95	0.95
Lanes:		2.00	1.00		2.00	1.00		1.00	1.00	2.00		0.72
Final Sat.:			1750		3800	1750		1900	1750		512	1288
Capacity Ana	-											
Vol/Sat:		0.49	0.03		0.14	0.05		0.04	0.14	0.05	0.14	0.14
				****			****				****	
Green Time:				7.0		82.1		26.6	69.9		28.6	28.6
Volume/Cap:			0.05		0.37	0.11		0.27	0.33	0.38		0.84
Delay/Veh:			6.5	98.8		22.5		61.6	32.6		84.6	84.6
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				98.8		22.5		61.6	32.6		84.6	84.6
LOS by Move:			A	F	D	С	F	E	С	Ε	F	F
HCM2kAvgQ:	8		1	4	9	3	11	-	9	5	16	16
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (AM)

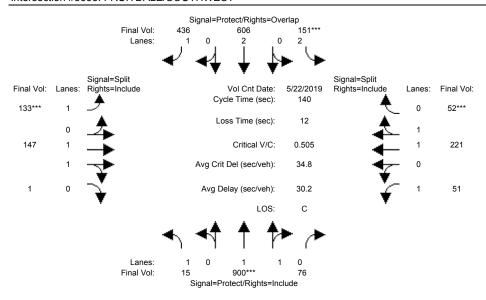
#### Intersection #3553: FRUITDALE/SOUTHWEST



Movement:	L ·	- T	- R	South Bound L - T - R			L -	- Т	- R	L - T - R		
Min. Green: Y+R:	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10
Volume Module												
Base Vol:	13	888	50	141	592	436	133	139	1	47	219	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	888	50	141	592	436	133	139	1	47	219	52
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	888	50	141	592	436	133	139	1	47	219	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	888	50	141	592	436	133	139	1	47	219	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	888	50	141	592	436	133	139	1	47	219	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	13	888	50	141	592	436	133	139	1	47	219	52
Saturation F												
Sat/Lane:		1900	1900		1900	1900		1900	1900		1900	1900
Adjustment:			0.95		1.00	0.92		0.97	0.95		0.98	0.95
Lanes:		1.89	0.11		2.00	1.00		1.99	0.01		1.61	0.39
Final Sat.:			197		3800	1750		3674	26		2990	710
Capacity Ana	-											
Vol/Sat:		0.25	0.25		0.16	0.25		0.04	0.04	0.03	0.07	0.07
Crit Moves:		****		****			****					****
	19.1		72.5		66.2	87.9		21.7	21.7		21.0	21.0
Volume/Cap:			0.49		0.33	0.40		0.24	0.24		0.49	0.49
Delay/Veh:		22.0	22.0		23.2	13.1		52.1	52.1		55.3	55.3
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			22.0		23.2	13.1		52.1	52.1		55.3	55.3
LOS by Move:			C	E	C	B	E	D	D	D	E	E
HCM2kAvgQ:	1		13	, 4	8	10	6	-	3	2	5	5
Note: Queue	repor	ted is	the n	umber	oi ca	rs per	lane	•				

#### Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (AM)

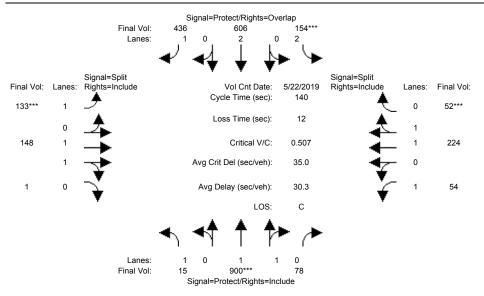
#### Intersection #3553: FRUITDALE/SOUTHWEST



Approach:	No	rth Bo	und	South Bound			Εä	ast Bo	und				
Movement:													
Min. Green:		10		7				10		10			
Y+R:					4.0	4.0		4.0		4.0		4.0	
Volume Module					-				_				
Base Vol:	13		50		592	436	133		1	47	219	52	
Growth Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Initial Bse:		888	50	141	592	436	133	139	1	47	219	52	
	0		0	0	0	0	0	0	0	0	0	0	
ATI:	2		26	10	14	0	0	8	0	4		0	
Initial Fut:			76	151	606	436	133	147	1	51	221	52	
User Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:			76	151	606	436	133	147	1	51	221	52	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	15	900	76	151	606	436	133	147	1	51	221	52	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	15	900	76	151	606	436	133	147	1	51	221	52	
Saturation F	low M	odule:											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.92	0.98	0.95	0.83	1.00	0.92	0.92	0.97	0.95	0.92	0.98	0.95	
	1.00	1.84	0.16	2.00	2.00	1.00	1.00	1.99	0.01	1.00	1.61	0.39	
Final Sat.:	1750	3412	288			1750			25	1750	2995	705	
Capacity Anal	lysis	Modul	e:										
Vol/Sat:	0.01	0.26	0.26	0.05	0.16	0.25	0.08	0.04	0.04	0.03	0.07	0.07	
Crit Moves:		****		****			****					****	
Green Time:	19.4	73.2	73.2	13.3	67.1	88.2	21.1	21.1	21.1	20.5	20.5	20.5	
Volume/Cap:	0.06	0.50	0.50	0.50	0.33	0.40	0.50	0.27	0.27	0.20	0.50	0.50	
Delay/Veh:		21.9	21.9	61.6	22.7	13.0	56.2	52.9	52.9	52.9	55.9	55.9	
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00	
AdiDel/Veh:				61.6		13.0		52.9	52.9		55.9	55.9	
LOS by Move:			C	E	C	В	E		D	D		E	
-	1		14	4	8	10	6			2		5	
Note: Queue				_			-	-		_		,	
			2					-					

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background + P (AM)

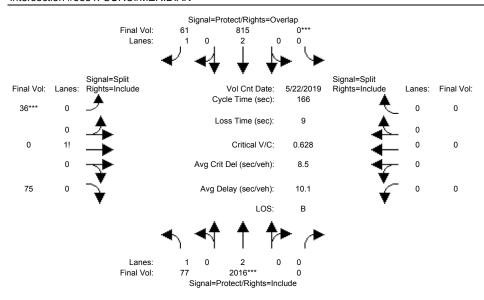
#### Intersection #3553: FRUITDALE/SOUTHWEST



Approach:	No	rth Bo	und	Soi	ound	Εä	ast Bo	und	West Bound			
Movement:										L -		
Min. Green:		10		7				10		10		
Y+R:		4.0			4.0	4.0			4.0	4.0		4.0
Volume Module					-						0.1.0	= 0
Base Vol:	13		50		592	436	133		1	47	219	52
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		888	50	141	592	436	133	139	1	47	219	52
	0	0	2	3	0	0	0	1	0	3	3	0
ATI:	2			10	14	0	0	8	0	4		0
Initial Fut:			78	154	606	436	133	148	1	54	224	52
User Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:		900	78	154	606	436	133	148	1	54	224	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	900	78	154	606	436	133	148	1	54	224	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	900	78	154	606	436	133	148	1	54	224	52
Saturation F	low M	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.83	1.00	0.92	0.92	0.97	0.95	0.92	0.98	0.95
	1.00	1.84	0.16	2.00	2.00	1.00	1.00	1.99	0.01	1.00	1.61	0.39
Final Sat.:	1750	3405	295			1750			25	1750	3002	697
Capacity Anal	lysis	Modul	e:									
Vol/Sat:	0.01	0.26	0.26	0.05	0.16	0.25	0.08	0.04	0.04	0.03	0.07	0.07
Crit Moves:		****		****			****					****
Green Time:	19.4	72.9	72.9	13.5	67.1	88.0	21.0	21.0	21.0	20.6	20.6	20.6
Volume/Cap:	0.06	0.51	0.51	0.51	0.33	0.40	0.51	0.27	0.27	0.21	0.51	0.51
Delay/Veh:		22.0	22.0	61.5	22.7	13.1	56.4	53.0	53.0	53.0	55.8	55.8
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdiDel/Veh:				61.5		13.1		53.0	53.0		55.8	55.8
LOS by Move:			C	E	C	В	E		D	D		E
-	1		14	4	8	10	6			2		5
Note: Queue				_			-			_	-	,
			2		32 00			-				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (AM)

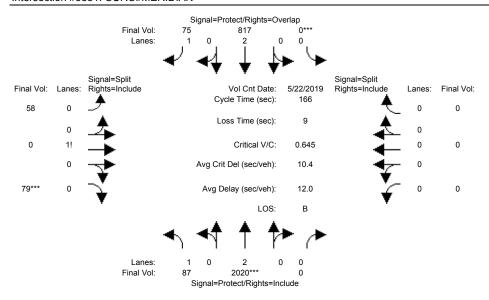
#### Intersection #3881: CURCI/MERIDIAN



				South Bound								
Movement:												
										'		
Min. Green:		10						0		0	4.0	
Y+R:		4.0				4.0			4.0			
Volume Module							ı		ı	ı		1
Base Vol:		2016	0	0	-		36	0	75	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	2016	0	0	815	61	36	0	75	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	77	2016	0	0	815	61	36	0	75	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:			0	0	815	61	36	0	75	0	0	0
Reduct Vol:			0	0	0	0	0	0	0	0	0	0
Reduced Vol:			0	0	815	61	36	0	75	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:			0		815	61	36	0	75	0	0	0
Saturation F				4000		4000						
		1900				1900		1900	1900		1900	1900
Adjustment:				0.92				0.92	0.92		1.00	0.92
							0.32		0.68		0.00	0.00
Final Sat.:				0					1182		0	0
Capacity Anal												
Vol/Sat:	-			0 00	0 21	0.03	0 06	0 00	0.06	0 00	0 00	0.00
Crit Moves:			0.00	****	0.21	0.03	****	0.00	0.00	0.00	0.00	0.00
Green Time:			0.0		116	133.1	16.8	0.0	16.8	0 0	0.0	0.0
Volume/Cap:			0.00		0.31			0.00	0.63		0.00	0.00
Delay/Veh:				0.0	9.5	3.4	78.6	0.0	78.6	0.0	0.0	0.0
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				0.0			78.6		78.6		0.0	0.0
LOS by Move:				A				A	7 O . C	0.0 A		A
	4		0	0	8		_			0		0
Note: Queue				umber			lane					
	-					-						

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (AM)

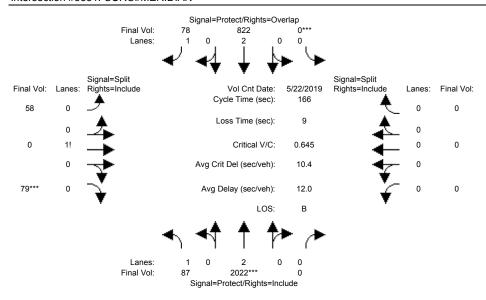
#### Intersection #3881: CURCI/MERIDIAN



Approach:	No	rth Bo	und	Sou	ath Bo	ound	Εā	ast Bo	und	West Bound		
Movement:											- T	
										'		
Min. Green:		10						0		0		0
Y+R:		4.0			4.0	4.0			4.0		4.0	
Volume Module												
Base Vol:		2016	0	22 Ma	-		36	0	75	0	0	0
Growth Adj:				1.00		1.00		1.00	1.00		1.00	1.00
Initial Bse:		2016	0	0	815	61	36	0	75	0	0	0
Added Vol:	0	0	0	0	013	0	0	0	0	0	-	0
ATI:	10	-	0	0	2	14	22	0	4	0	-	0
Initial Fut:			0	0		75	58	0	79	0		0
User Adj:			1.00	1.00		1.00		1.00	1.00	-	1.00	1.00
PHF Adi:	1.00		1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Volume:			0	0	817	75	58	0	79	0	0	0
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			0	0	817	75	58	0	79	0	0	0
PCE Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	87	2020	0	0	817	75	58	0	79	0	0	0
Saturation F	low M	odule:										
Sat/Lane:		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.92	0.92	0.92	1.00	0.92
			0.00	0.00	2.00	1.00	0.42	0.00	0.58	0.00	0.00	0.00
Final Sat.:				0				0			0	0
Capacity Ana	-											
Vol/Sat:			0.00		0.22	0.04	0.08	0.00	0.08	0.00	0.00	0.00
		****		****					****			
Green Time:						131.3		0.0	20.2	0.0		0.0
Volume/Cap:				0.00		0.05		0.00	0.64		0.00	0.00
Delay/Veh:				0.0		3.8	76.2	0.0	76.2	0.0	0.0	0.0
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				0.0		3.8	76.2		76.2		0.0	0.0
LOS by Move:				A				A	E	A		A
- J ~ ·		20	0	0	8	1	8		8	0	0	0
Note: Queue	repor	ted is	the n	umber	oi ca	ars per	lane	•				

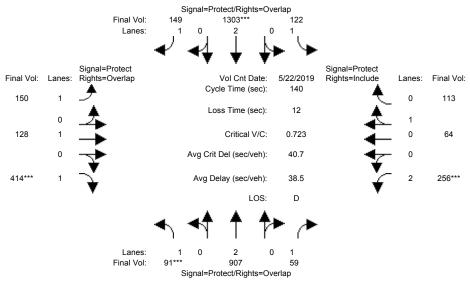
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background + P (AM)

#### Intersection #3881: CURCI/MERIDIAN



Approach:	No	rth Bo	und	South Bound				ast Bo	und			
Movement:	L ·	- T ·	- R	L -	- T	- R	L -	- T	- R	L -	- T	- R
Min. Green:	7	10	0	0	10	10	10	0		0	0	0
Y+R:	4.0		4.0	4.0		4.0	4.0		4.0	4.0		4.0
Volume Module					_							
Base Vol:		2016	0	0	815	61	36	0	75	0	0	0
Growth Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
Initial Bse:		2016	0	0	815	61	36	0	75	0	0	0
Added Vol:	0	2	0	0	5	3	0	0	0	0	0	0
ATI:	10		0	0	2	14	22	0	4	0	0	0
Initial Fut:	87	2022	0	0	822	78	58	0	79	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	87	2022	0	0	822	78	58	0	79	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	2022	0	0	822	78	58	0	79	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	87	2022	0	0	822	78	58	0	79	0	0	0
Saturation F	low M	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.92	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.42	0.00	0.58	0.00	0.00	0.00
Final Sat.:				0			741		1009	0		0
Capacity Anal	lysis	Module										
Vol/Sat:		0.53	0.00	0.00	0.22	0.04	0.08	0.00	0.08	0.00	0.00	0.00
		****		****					****			
Green Time:	25.6		0.0	0.0	111	131.4	20.1	0.0	20.1	0.0	0.0	0.0
Volume/Cap:	0.32	0.65	0.00	0.00	0.32	0.06	0.65	0.00	0.65	0.00	0.00	0.00
Delay/Veh:			0.0	0.0	11.6	3.8	76.2	0.0	76.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	63.2	5.9		0.0		3.8	76.2	0.0	76.2	0.0	0.0	0.0
LOS by Move:	E	A	A	А	В	A	E	A	E	A	A	A
HCM2kAvgQ:	4	20	0	0	8	1	8	0	8	0	0	0
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane	•				

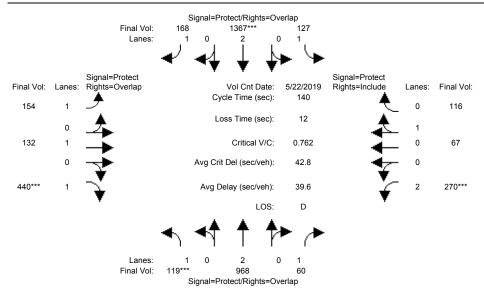
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (PM)



Approach: Movement:	No:	rth Boi	und - R	South Bound L - T - R			Ea	ast Bo - T	und - R	L - T - R			
		10	10	7	10	10		10		7			
Y+R:		4.0				4.0			4.0		4.0		
Volume Module	e: >>	Count	Date:	22 Ma	ay 201	9 <<							
Base Vol:	91	907	59	122		149	150	128	414	256	64	113	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	91	907	59		1303	149	150	128		256	64	113	
Added Vol:		0	0	0		0	0	0	0	0	0	0	
ATI:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	91	907	59	122	1303	149	150	128	414	256	64	113	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	91	907	59	122	1303	149	150	128	414	256	64	113	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	91	907	59	122	1303	149	150	128	414	256	64	113	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	91	907	59	122	1303	149	150	128	414	256	64	113	
Saturation F	low Mo	odule:											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	0.95	0.95	
Lanes:	1.00	2.00	1.00	1.00		1.00	1.00	1.00	1.00	2.00	0.36	0.64	
Final Sat.:			1750	1750		1750		1900	1750	3150		1149	
Capacity Ana	-												
Vol/Sat:						0.09	0.09	0.07	0.24	0.08	0.10	0.10	
Crit Moves:	****				****				****	****			
Green Time:	10.1	59.2		17.3		90.4		35.8	45.8		27.5	27.5	
Volume/Cap:	0.72	0.56	0.06	0.56	0.72	0.13	0.50	0.26	0.72	0.72		0.50	
Delay/Veh:	82.1		15.7		30.9	9.7		41.9	46.0		51.2	51.2	
User DelAdj:			1.00	1.00		1.00		1.00	1.00	1.00		1.00	
AdjDel/Veh:				61.2	30.9	9.7	53.9	41.9	46.0	67.2	51.2	51.2	
LOS by Move:				E			D	_		E		D	
HCM2kAvgQ:				6			6		17	8	7	7	
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•					

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (PM)

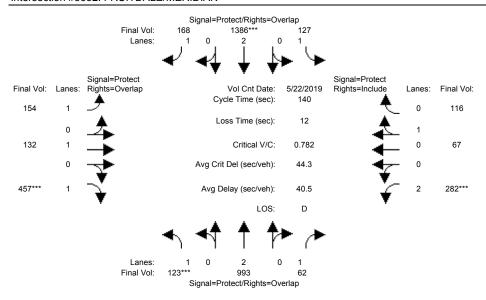
# Intersection #3552: FRUITDALE/MERIDIAN



Approach:	No	rth Bo	und	Soi	ıth Bo	und	Εá	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R					- T	
Min. Green:		10		7				10		7		10
Y+R:	4.0		4.0		4.0	4.0		4.0			4.0	4.0
Volume Modul					-		4=0	400		0=0		
Base Vol:	91		59		1303	149	150		414	256	64	113
Growth Adj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:		907	59		1303	149	150	128	414	256	64	113
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	28	61	1	5	64	19	4	4	26	14	3	3
Initial Fut:		968	60		1367	168	154	132	440	270	67	116
User Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:	1.00		1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:		968	60		1367	168	154	132	440	270	67	116
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:		968	60		1367	168	154	132	440	270	67	116
PCE Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
FinalVolume:			60		1367	168	154	132	440	270	67	116
	1											
Saturation F.												
Sat/Lane:		1900	1900		1900	1900		1900	1900		1900	1900
_	0.92			0.92		0.92		1.00	0.92		0.95	0.95
Lanes:		2.00	1.00		2.00	1.00		1.00	1.00		0.37	0.63
Final Sat.:			1750		3800	1750		1900	1750		659	1141
Capacity Ana	-			0 0 0	0 06	0 10	0 00	0 0 0	0 05	0 00	0 10	0 10
Vol/Sat:		0.25	0.03	0.07	0.36	0.10	0.09	0.07	0.25	****	0.10	0.10
Crit Moves:	****		=						****			
Green Time:			76.9		66.1	89.0		33.7	46.2		26.5	26.5
Volume/Cap:			0.06		0.76	0.15		0.29	0.76	0.76		0.54
Delay/Veh:			14.8		32.5	10.3		43.7	47.9		52.9	52.9
User DelAdj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:			14.8	61.9		10.3		43.7	47.9		52.9	52.9
LOS by Move:			В	E	С	В	E		D	E	D	D
	7		1	6	25	3	6	_	18	8	8	8
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background + P (PM)

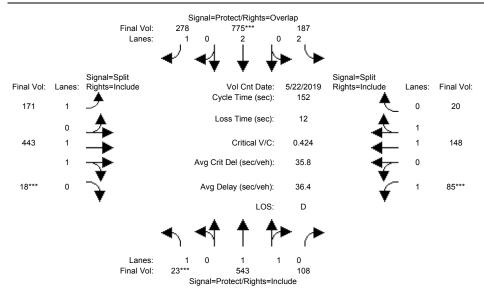
# Intersection #3552: FRUITDALE/MERIDIAN



Approach:	No	rth Bo	und	Sou	ith Bo	und	Εá	ast Bo	und	We	est Bo	und
Movement:	L ·	- T ·	- R	L -	- T	- R	L -	- T	- R	L -	- Т	- R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0		4.0
Volume Module					-							
Base Vol:	91	907	59		1303	149	150	128	414	256	64	113
Growth Adj:			1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Initial Bse:		907	59		1303	149	150	128	414	256	64	113
Added Vol:	4		2	0	19	0	0	0	17	12	0	0
ATI:	28	61	1	5	64	19	4	4	26	14	3	3
Initial Fut:		993	62		1386	168	154	132	457	282	67	116
User Adj:		1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00
PHF Volume:	123	993	62		1386	168	154	132	457	282	67	116
Reduct Vol:	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:		993	62		1386	168	154	132	457	282	67	116
PCE Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
MLF Adj:			1.00	1.00		1.00		1.00	1.00	1.00		1.00
FinalVolume:			62		1386	168	154		457	282	67	116
	1											
Saturation F												
Sat/Lane:		1900	1900		1900	1900		1900	1900		1900	1900
_	0.92			0.92		0.92		1.00	0.92		0.95	0.95
Lanes:		2.00	1.00		2.00	1.00		1.00	1.00		0.37	0.63
		3800	1750		3800	1750		1900	1750		659	1141
Capacity Ana	-											
Vol/Sat:		0.26	0.04	0.07	0.36	0.10	0.09	0.07	0.26	0.09	0.10	0.10
Crit Moves:	****				****				****	****		
Green Time:			76.9		65.3	88.5		34.1	46.7		26.9	26.9
_	0.78		0.06	0.60		0.15		0.28	0.78		0.53	0.53
Delay/Veh:			14.8	63.1		10.5		43.3	48.9		52.4	52.4
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:	84.4	30.9	14.8	63.1	33.7	10.5	55.2	43.3	48.9	70.9	52.4	52.4
LOS by Move:			В	Ε	С	В	E	D	D	E	D	D
HCM2kAvgQ:	7		1	6	26	3	6	_	19	9	8	8
Note: Queue	repor	ted is	the n	umber	of ca	ırs per	lane	•				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (PM)

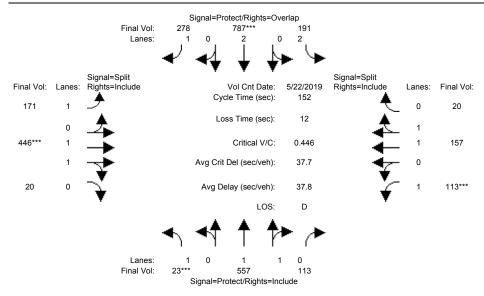
# Intersection #3553: FRUITDALE/SOUTHWEST



Approach: Movement:	L ·	- T	- R	L -	- T	ound - R	L -	- T	- R	L -	- Т	- R
Min. Green: Y+R:	7 4.0	10 4.0	10	7 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0
Volume Module												
Base Vol:	23	543	108	187	775	278	171	443	18	85	148	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	543	108	187	775	278	171	443	18	85	148	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	543	108	187	775	278	171	443	18	85	148	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	23	543	108	187	775	278	171	443	18	85	148	20
	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	543	108	187	775	278	171	443	18	85	148	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:		543	108	187	775	278	171	443	18	85	148	20
Saturation F												
Sat/Lane:		1900	1900		1900	1900		1900	1900	1900		1900
Adjustment:			0.95		1.00	0.92		0.97	0.95		0.98	0.95
		1.66	0.34		2.00	1.00		1.92	0.08		1.76	0.24
			614		3800	1750			144		3259	440
Capacity Anal	_											
Vol/Sat:		0.18	0.18	0.06		0.16	0.10	0.12	0.12	0.05	0.05	0.05
Crit Moves:		= 0 0			****				****	****		
	7.0		59.0			115.9		43.9	43.9		17.1	17.1
Volume/Cap:			0.45		0.43	0.21		0.43	0.43	0.43		0.40
4 .	72.0		34.7		26.7	5.2		44.2	44.2		63.3	63.3
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			34.7		26.7	5.2		44.2	44.2		63.3	63.3
LOS by Move:		С	С	E	С	A	D	D	D	E	E	E
HCM2kAvgQ:	1		11	. 5	12	4	7		9	4	4	4
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane	•				

### Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (PM)

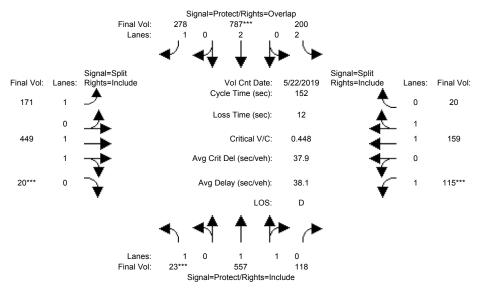
# Intersection #3553: FRUITDALE/SOUTHWEST



Movement: L - T -			und South Bound					ast Bo	und	We	est Bo	und
											- T	
Min. Green:		10		7				10		10		10
Y+R:	4.0		4.0		4.0			4.0		4.0		4.0
Volume Module					-							
Base Vol:	23		108		775	278	171		18	85	148	20
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		543	108	187	775	278	171	443	18	85	148	20
Added Vol:	0		0	0	0	0	0	0	0	0	0	0
ATI:	0		5	4	12	0	0	3	2	28	9	0
Initial Fut:			113	191		278	171	446	20	113	157	20
User Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:	1.00		1.00	1.00		1.00		1.00	1.00		1.00	1.00
· · · · · · ·	23	557	113	191	787	278	171	446	20	113	157	20
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			113	191	787	278	171	446	20	113	157	20
_	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.00
MLF Adj:			1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:			113		787	278	171	446	20	113		20
Saturation F												
Sat/Lane:		1900	1900	1900		1900		1900	1900		1900	1900
Adjustment:				0.83		0.92		0.97	0.95		0.98	0.95
Lanes:	1.00		0.35	2.00		1.00		1.91	0.09		1.77	0.23
Final Sat.:			624		3800	1750			159		3282	418
Capacity Anal	-			0 06	0 01	0 1 6	0 10	0 10	0 10	0 00	0 05	0 05
Vol/Sat:	****			0.06	V.∠⊥ ****	0.16	0.10	0.13	0.13	U.U6	0.05	0.05
Crit Moves:				10 1			40 1		40.1		01.6	01.6
						111.4		42.1	42.1		21.6	21.6
Volume/Cap:			0.48	0.48		0.22		0.45	0.45		0.34	0.34
Delay/Veh:			36.4		28.6	6.5	44.5		45.8		59.1	59.1
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				62.7		6.5		45.8	45.8		59.1	59.1
LOS by Move:			D	E	С	A	D	D	D	E	E	E
	1		12	5	12	4	7	_	9	5	4	4
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane	•				

### Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background + P (PM)

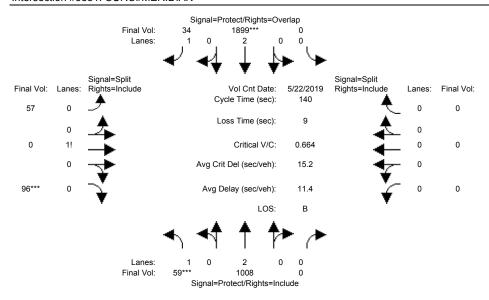
# Intersection #3553: FRUITDALE/SOUTHWEST



Approach: Movement:	L ·	- T	- R	L -	- T	- R	L -	- Т	- R		- R
Min. Green: Y+R:	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	10	10 4.0	10	10 10 4.0 4.0	10 4.0
Volume Module											
Base Vol:	23	543	108	187	775	278	171	443	18	85 148	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
Initial Bse:	23	543	108	187	775	278	171	443	18	85 148	20
Added Vol:	0	0	5	9	0	0	0	3	0	2 2	-
ATI:	0		5	4	12	0	0	3	2	28 9	0
Initial Fut:	23	557	118	200	787	278	171	449	20	115 159	
User Adj:			1.00		1.00	1.00		1.00	1.00	1.00 1.00	
PHF Adj:		1.00	1.00	1.00		1.00		1.00	1.00	1.00 1.00	
PHF Volume:	23	557	118	200	787	278	171	449	20	115 159	
	0		0	0	0	0	0	0	0	0 0	
Reduced Vol:		557	118	200	787	278	171	449	20	115 159	
_	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
_	1.00		1.00		1.00	1.00		1.00	1.00	1.00 1.00	
FinalVolume:		557	118	200	787	278	171	449	20	115 159	
Catanatian E											
Saturation Fi Sat/Lane:		1900	1900	1900	1000	1900	1 0 0 0	1900	1900	1900 1900	1900
Adjustment:			0.95	0.83		0.92		0.97	0.95	0.92 0.98	
_		1.64	0.36		2.00	1.00		1.91	0.93	1.00 1.77	
Final Sat.:			647		3800	1750		3542	158	1750 3286	
Capacity Anal				'		'	1		'	1	'
Vol/Sat:	0.01	0.18	0.18	0.06	0.21	0.16	0.10	0.13	0.13	0.07 0.05	0.05
Crit Moves:	****				****				****	***	
		56.3	56.3	19.6	68.9	111.1	42.2	42.2	42.2	21.9 21.9	21.9
Volume/Cap:	0.29	0.49	0.49	0.49	0.46	0.22	0.35	0.46	0.46	0.46 0.34	0.34
Delay/Veh:	72.0	37.1	37.1	62.5	28.8	6.6	44.4	45.7	45.7	60.9 58.9	58.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:	72.0	37.1	37.1	62.5	28.8	6.6	44.4	45.7	45.7	60.9 58.9	58.9
LOS by Move:	E	D	D	E	С	A	D	D	D	E E	_
HCM2kAvgQ:	1	12	12	6	12	4	7	9	9	5 4	4
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane	•			

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (PM)

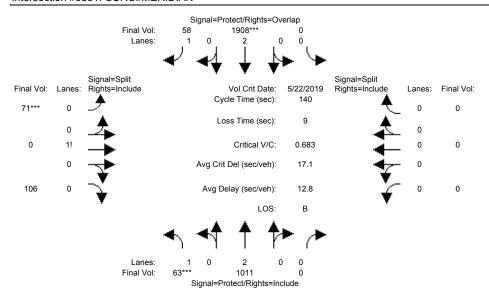
# Intersection #3881: CURCI/MERIDIAN



Approach:	No	rth Bo	und	Sou	ath Bo	ound	Εā	ast Bo	und	We	est Bo	und
Movement:											- T	
						,	,			•		
Min. Green:		10						0			0	
Y+R:		4.0			4.0	4.0		4.0				4.0
Volume Module												
Base Vol:		1008	0		1899		57	0	96	0	0	0
Growth Adj:					1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		1008	0		1899	34	57	0	96	0	0	0
	0		0	0	0	0	0	0	0	0	0	0
ATI:	0		0	0	0	0	0	0	0	0	-	0
Initial Fut:			0	0	1899	34	57	0	96	0	0	0
User Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume:		1008	0	0	1899	34	57	0	96	0	0	0
Reduct Vol:	0	0	0	0	0		0	0	0	0	0	0
Reduced Vol:		1008	0	0	1899	34	57	0	96	0	0	0
PCE Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	59	1008	0	0	1899	34	57	0	96	0	0	0
	1											
Saturation F												
		1900				1900		1900	1900		1900	1900
Adjustment:				0.92		0.92		0.92	0.92		1.00	0.92
						1.00		0.00	0.63		0.00	0.00
Final Sat.:				0		1750		0		0		0
Capacity Anal	-			0 00	0 50	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Vol/Sat:			0.00	0.00	0.50 ***	0.02	0.09	0.00	0.09	0.00	0.00	0.00
Crit Moves:		110	0 0	0 0		100 0	10 4	0 0		0 0	0 0	0 0
	7.1		0.0				18.4		18.4	0.0		0.0
Volume/Cap:			0.00		0.66	0.02		0.00	0.66		0.00	0.00
Delay/Veh:				0.0	9.1	1.0	64.9	0.0	64.9	0.0	0.0	0.0
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				0.0			64.9		64.9		0.0	0.0
LOS by Move:		A 6	A 0	A 0	A 20	A 0	E 8	A	E 8	A 0		A
				-			-		ŏ	U	U	0
Note: Queue	repor	tea is	ine n	umper	OI C	ars per	⊥ane	•				

### Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (PM)

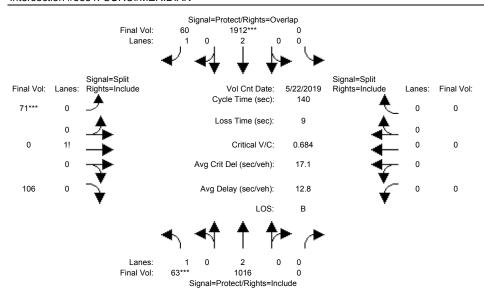
# Intersection #3881: CURCI/MERIDIAN



Approach:	No	rth Bo	und	Soi	ath Bo	ound	Εá	ast Bo	und	We	est Bo	und
Movement:	L ·	- T ·	- R	L -	- Т	- R	L -	- T	- R	L -	- Т	- R
		10						0		0		
Y+R:		4.0				4.0			4.0		4.0	
Volume Module					_			0	0.6			0
Base Vol:		1008	-		1899		57		96	0	0	0
Growth Adj:						1.00		1.00	1.00		1.00	1.00
Initial Bse:			0		1899	34	57	0	96	0	0	0
	0		0	0	0	0	0	0	0	0	-	0
ATI:		3	0	0	-		14	0	10	0		0
Initial Fut:			0		1908	58	71	0		0		0
User Adj:				1.00		1.00		1.00	1.00		1.00	
PHF Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Volume:			0		1908	58	71	0	106	0	0	0
Reduct Vol:			0	-	0		0	0	0	0	0	0
Reduced Vol:			0		1908		71	0	106	0	-	0
PCE Adj:			1.00		1.00	1.00		1.00	1.00		1.00	
MLF Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
FinalVolume:			0		1908	58	71		106	0	-	0
Saturation F						4000			4000			
Sat/Lane:								1900	1900		1900	
Adjustment:						0.92		0.92	0.92		1.00	0.92
Lanes:								0.00	0.60		0.00	0.00
Final Sat.:									1048	. 0		0
Capacity Anal				0 00	0 50	0 00	0 10	0 00	0 10	0 00	0 00	0 00
Vol/Sat:			0.00	0.00	****	0.03	V.1U	0.00	0.10	0.00	0.00	0.00
Crit Moves:		110	0 0	0 0		100 6		0 0	00 7	0 0	0 0	0 0
Green Time:						123.6	20.7			0.0		0.0
Volume/Cap:			0.00		0.68			0.00	0.68		0.00	0.00
Delay/Veh:				0.0		1.0	63.8	0.0		0.0	0.0	0.0
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			0.0				63.8			0.0		0.0
LOS by Move:			A				E			A		A
		6	0	0		0	-	-	9	0	0	0
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane	•				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background + P (PM)

# Intersection #3881: CURCI/MERIDIAN



Approach:	No	rth Bo	und	Soi	ath Bo	ound	Εá	ast Bo	und	We	est Bo	und
Movement:												
		10								0		
Y+R:		4.0				4.0			4.0			
Volume Module					_			0	0.6	0	0	0
Base Vol:		1008	-		1899		57		96	0	0	0
Growth Adj:								1.00	1.00		1.00	1.00
Initial Bse:			0		1899	34	57	0	96	0	0	0
	0		0	0	4	_	0	0	0	0	-	0
ATI:		3	0	0	-		14	0	10	0		0
Initial Fut:			0		1912		71	0		0		0
User Adj:				1.00		1.00		1.00	1.00		1.00	
PHF Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Volume:			0		1912	60	71	0	106	0	0	0
Reduct Vol:			0		0		0	0	0	0	0	0
Reduced Vol:			0		1912		71			0	0	0
PCE Adj:			1.00		1.00	1.00		1.00	1.00		1.00	
MLF Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
FinalVolume:			0		1912		71	0	106	0	0	0
Saturation F						4000			4000			
Sat/Lane:								1900	1900		1900	
Adjustment:						0.92		0.92	0.92		1.00	0.92
Lanes:							0.40		0.60		0.00	0.00
Final Sat.:										. 0		0
Capacity Anal				0 00	0 50	0 00	0 10	0 00	0 10	0 00	0 00	0 00
Vol/Sat:			0.00	0.00	****	0.03	V.1U	0.00	0.10	0.00	0.00	0.00
Crit Moves:		110	0 0	0 0		100 6		0 0	00 7	0 0	0 0	0 0
Green Time:						123.6	20.7			0.0		0.0
Volume/Cap:			0.00			0.04		0.00	0.68		0.00	0.00
Delay/Veh:				0.0			63.9	0.0		0.0	0.0	0.0
User DelAdj:				1.00		1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:			0.0				63.9		63.9	0.0		0.0
LOS by Move:			A				E			A		A
		6	0	0			-	-	9	0	0	0
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane	•				

# **Appendix F Queue Length Calculations**

Race/I-280 NB Off-Ramp Race/I-280 NB Off-Ramp Race/I-280 NB Off-Ramp WBL WBL WBL AM AM AM Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.98 Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Plus Project Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 0.5 2 0.5 0.5 0.95 2 0.95 2

Percentile =	0.95	2	Percentile =	0.95	2	Percentile =	0.95	2
		Number of			Number of			Number of
Individual	Cumulative	Queued	Individual	Cumulative	Queued	Individual	Cumulative	Queued
Probability	Probability	Vehicles	Probability	Probability	Vehicles	Probability	Probability	Vehicles
0.6025	0.6025	0	0.5998	0.5998	0	0.5941	0.5941	0
0.3053	0.9078	1	0.3066	0.9064	1	0.3093	0.9035	1
0.0773	0.9851	2	0.0783	0.9848	2	0.0805	0.9840	2
0.0131	0.9982	3	0.0133	0.9981	3	0.0140	0.9980	3
0.0017	0.9998	4	0.0017	0.9998	4	0.0018	0.9998	4
0.0002	1.0000	5	0.0002	1.0000	5	0.0002	1.0000	5
0.0000	1.0000	6	0.0000	1.0000	6	0.0000	1.0000	6
0.0000	1.0000	7	0.0000	1.0000	7	0.0000	1.0000	7
0.0000	1.0000	8	0.0000	1.0000	8	0.0000	1.0000	8
0.0000	1.0000	9	0.0000	1.0000	9	0.0000	1.0000	9
0.0000	1.0000	10	0.0000	1.0000	10	0.0000	1.0000	10
0.0000	1.0000	11	0.0000	1.0000	11	0.0000	1.0000	11
0.0000	1.0000	12	0.0000	1.0000	12	0.0000	1.0000	12
0.0000	1.0000	13	0.0000	1.0000	13	0.0000	1.0000	13
0.0000	1.0000	14	0.0000	1.0000	14	0.0000	1.0000	14
0.0000	1.0000	15	0.0000	1.0000	15	0.0000	1.0000	15
0.0000	1.0000	16	0.0000	1.0000	16	0.0000	1.0000	16
0.0000	1.0000	17	0.0000	1.0000	17	0.0000	1.0000	17
0.0000	1.0000	18	0.0000	1.0000	18	0.0000	1.0000	18
0.0000	1.0000	19	0.0000	1.0000	19	0.0000	1.0000	19
0.0000	1.0000	20	0.0000	1.0000	20	0.0000	1.0000	20
0.0000	1.0000	21	0.0000	1.0000	21	0.0000	1.0000	21
0.0000	1.0000	22	0.0000	1.0000	22	0.0000	1.0000	22
0.0000	1.0000	23	0.0000	1.0000	23	0.0000	1.0000	23
0.0000	1.0000	24	0.0000	1.0000	24	0.0000	1.0000	24
0.0000	1.0000	25	0.0000	1.0000	25	0.0000	1.0000	25
0.0000	1.0000	26	0.0000	1.0000	26	0.0000	1.0000	26
0.0000	1.0000	27	0.0000	1.0000	27	0.0000	1.0000	27
0.0000	1.0000	28	0.0000	1.0000	28	0.0000	1.0000	28
0.0000	1.0000	29	0.0000	1.0000	29	0.0000	1.0000	29
0.0000	1.0000	30	0.0000	1.0000	30	0.0000	1.0000	30
0.0000	1.0000	31	0.0000	1.0000	31	0.0000	1.0000	31
0.0000	1.0000	32	0.0000	1.0000	32	0.0000	1.0000	32
0.0000	1.0000	33	0.0000	1.0000	33	0.0000	1.0000	33
0.0000	1.0000	34	0.0000	1.0000	34	0.0000	1.0000	34
0.0000	1.0000	35	0.0000	1.0000	35	0.0000	1.0000	35
0.0000	1.0000	36	0.0000	1.0000	36	0.0000	1.0000	36
0.0000	1.0000	37	0.0000	1.0000	37	0.0000	1.0000	37
0.0000	1.0000	38	0.0000	1.0000	38	0.0000	1.0000	38
0.0000	1.0000	39	0.0000	1.0000	39	0.0000	1.0000	39
0.0000	1.0000	40	0.0000	1.0000	40	0.0000	1.0000	40
0.0000	1.0000	41	0.0000	1.0000	41	0.0000	1.0000	41
0.0000	1.0000	42	0.0000	1.0000	42	0.0000	1.0000	42
0.0000	1.0000	43	0.0000	1.0000	43	0.0000	1.0000	43
0.0000	1.0000	44	0.0000	1.0000	44	0.0000	1.0000	44
0.0000	1.0000	45	0.0000	1.0000	45	0.0000	1.0000	45

Race/I-280 NB Off-Ramp Race/I-280 NB Off-Ramp Race/I-280 NB Off-Ramp WBL WBL WBL PM PM PM Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Plus Project Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 1.7 1.5 1.6 0.95 4 0.95

4

Percentile =	0.95	4		Percentile =	0.95	4	Percentile =	0.95	4
		Number of	Ī			Number of			Number of
Individual	Cumulative	Queued		Individual	Cumulative	Queued	Individual	Cumulative	Queued
Probability	Probability	Vehicles		Probability	Probability	Vehicles	Probability	Probability	Vehicles
0.2215	0.2215	0		0.2036	0.2036	0	0.1860	0.1860	0
0.3339	0.5554	1		0.3241	0.5277	1	0.3129	0.4989	1
0.2516	0.8071	2		0.2579	0.7856	2	0.2631	0.7620	2
0.1264	0.9335	3		0.1368	0.9224	3	0.1475	0.9095	3
0.0476	0.9811	4		0.0544	0.9768	4	0.0620	0.9715	4
0.0144	0.9954	5		0.0173	0.9941	5	0.0209	0.9924	5
0.0036	0.9990	6		0.0046	0.9987	6	0.0058	0.9982	6
0.0008	0.9998	7		0.0010	0.9997	7	0.0014	0.9996	7
0.0001	1.0000	8		0.0002	1.0000	8	0.0003	0.9999	8
0.0000	1.0000	9		0.0000	1.0000	9	0.0001	1.0000	9
0.0000	1.0000	10		0.0000	1.0000	10	0.0000	1.0000	10
0.0000	1.0000	11		0.0000	1.0000	11	0.0000	1.0000	11
0.0000	1.0000	12		0.0000	1.0000	12	0.0000	1.0000	12
0.0000	1.0000	13		0.0000	1.0000	13	0.0000	1.0000	13
0.0000	1.0000	14		0.0000	1.0000	14	0.0000	1.0000	14
0.0000	1.0000	15		0.0000	1.0000	15	0.0000	1.0000	15
0.0000	1.0000	16		0.0000	1.0000	16	0.0000	1.0000	16
0.0000	1.0000	17		0.0000	1.0000	17	0.0000	1.0000	17
0.0000	1.0000	18		0.0000	1.0000	18	0.0000	1.0000	18
0.0000	1.0000	19		0.0000	1.0000	19	0.0000	1.0000	19
0.0000	1.0000	20		0.0000	1.0000	20	0.0000	1.0000	20
0.0000	1.0000	21		0.0000	1.0000	21	0.0000	1.0000	21
0.0000	1.0000	22		0.0000	1.0000	22	0.0000	1.0000	22
0.0000	1.0000	23		0.0000	1.0000	23	0.0000	1.0000	23
0.0000	1.0000	24		0.0000	1.0000	24	0.0000	1.0000	24
0.0000	1.0000	25		0.0000	1.0000	25	0.0000	1.0000	25
0.0000	1.0000	26		0.0000	1.0000	26	0.0000	1.0000	26
0.0000	1.0000	27		0.0000	1.0000	27	0.0000	1.0000	27
0.0000	1.0000	28		0.0000	1.0000	28	0.0000	1.0000	28
0.0000	1.0000	29		0.0000	1.0000	29	0.0000	1.0000	29
0.0000	1.0000	30		0.0000	1.0000	30	0.0000	1.0000	30
0.0000	1.0000	31		0.0000	1.0000	31	0.0000	1.0000	31
0.0000	1.0000	32		0.0000	1.0000	32	0.0000	1.0000	32
0.0000	1.0000	33		0.0000	1.0000	33	0.0000	1.0000	33
0.0000	1.0000	34		0.0000	1.0000	34	0.0000	1.0000	34
0.0000	1.0000	35		0.0000	1.0000	35	0.0000	1.0000	35
0.0000	1.0000	36		0.0000	1.0000	36	0.0000	1.0000	36
0.0000	1.0000	37		0.0000	1.0000	37	0.0000	1.0000	37
0.0000	1.0000	38		0.0000	1.0000	38	0.0000	1.0000	38
0.0000	1.0000	39		0.0000	1.0000	39	0.0000	1.0000	39
0.0000	1.0000	40		0.0000	1.0000	40	0.0000	1.0000	40
0.0000	1.0000	41		0.0000	1.0000	41	0.0000	1.0000	41
0.0000	1.0000	42		0.0000	1.0000	42	0.0000	1.0000	42
0.0000	1.0000	43		0.0000	1.0000	43	0.0000	1.0000	43
0.0000	1.0000	44		0.0000	1.0000	44	0.0000	1.0000	44
0.0000	1.0000	45		0.0000	1.0000	45	0.0000	1.0000	45

Meridian/Fruitdale			Meridian/Fruitdale			Meridian/Fruitdale		
WBL			WBL			WBL		
AM			AM			AM		
<b>Existing Conditions</b>			Background Condition	ons		Background Plus Pr	oject Conditions	
Avg. Queue Per Land	e in Veh=	3.5	Avg. Queue Per Lan	e in Veh=	3.7	Avg. Queue Per Lar	ne in Veh=	3.8
Percentile =	0.95	7	Percentile =	0.95	7	Percentile =	0.95	7

		Number of			Number of			Number of
Individual	Cumulative	Queued	Individual	Cumulative	Queued	Individual	Cumulative	Queued
Probability	Probability	Vehicles	Probability	Probability	Vehicles	Probability	Probability	Vehicles
0.0294	0.0294	0	0.0250	0.0250	0	0.0228	0.0228	0
0.1036	0.1330	1	0.0922	0.1172	1	0.0862	0.1090	1
0.1828	0.3158	2	0.1701	0.2873	2	0.1630	0.2720	2
0.2149	0.5307	3	0.2092	0.4965	3	0.2054	0.4774	3
0.1895	0.7202	4	0.1929	0.6894	4	0.1942	0.6715	4
0.1337	0.8540	5	0.1423	0.8317		0.1468	0.8183	5
0.0786	0.9326	6	0.0875	0.9192	5 6	0.0925	0.9109	6
0.0396	0.9722	7	0.0461	0.9653	7	0.0500	0.9608	7
0.0175	0.9897	8	0.0213	0.9865	8	0.0236	0.9845	8
0.0068	0.9965	9	0.0087	0.9952	9	0.0099	0.9944	9
0.0024	0.9989	10	0.0032	0.9985	10	0.0038	0.9981	10
0.0008	0.9997	11	0.0011	0.9995	11	0.0013	0.9994	11
0.0002	0.9999	12	0.0003	0.9999	12	0.0004	0.9998	12
0.0001	1.0000	13	0.0001	1.0000	13	0.0001	1.0000	13
0.0000	1.0000	14	0.0000	1.0000	14	0.0000	1.0000	14
0.0000	1.0000	15	0.0000	1.0000	15	0.0000	1.0000	15
0.0000	1.0000	16	0.0000	1.0000	16	0.0000	1.0000	16
0.0000	1.0000	17	0.0000	1.0000	17	0.0000	1.0000	17
0.0000	1.0000	18	0.0000	1.0000	18	0.0000	1.0000	18
0.0000	1.0000	19	0.0000	1.0000	19	0.0000	1.0000	19
0.0000	1.0000	20	0.0000	1.0000	20	0.0000	1.0000	20
0.0000	1.0000	21	0.0000	1.0000	21	0.0000	1.0000	21
0.0000	1.0000	22	0.0000	1.0000	22	0.0000	1.0000	22
0.0000	1.0000	23	0.0000	1.0000	23	0.0000	1.0000	23
0.0000	1.0000	24	0.0000	1.0000	24	0.0000	1.0000	24
0.0000	1.0000	25	0.0000	1.0000	25	0.0000	1.0000	25
0.0000	1.0000	26	0.0000	1.0000	26	0.0000	1.0000	26
0.0000	1.0000	27	0.0000	1.0000	27	0.0000	1.0000	27
0.0000	1.0000	28	0.0000	1.0000	28	0.0000	1.0000	28
0.0000	1.0000	29	0.0000	1.0000	29	0.0000	1.0000	29
0.0000	1.0000	30	0.0000	1.0000	30	0.0000	1.0000	30
0.0000	1.0000	31	0.0000	1.0000	31	0.0000	1.0000	31
0.0000	1.0000	32	0.0000	1.0000	32	0.0000	1.0000	32
0.0000	1.0000	33	0.0000	1.0000	33	0.0000	1.0000	33
0.0000	1.0000	34	0.0000	1.0000	34	0.0000	1.0000	34
0.0000	1.0000	35	0.0000	1.0000	35	0.0000	1.0000	35
0.0000	1.0000	36	0.0000	1.0000	36	0.0000	1.0000	36
0.0000	1.0000	37	0.0000	1.0000	37	0.0000	1.0000	37
0.0000	1.0000	38	0.0000	1.0000	38	0.0000	1.0000	38
0.0000	1.0000	39	0.0000	1.0000	39	0.0000	1.0000	39
0.0000	1.0000	40	0.0000	1.0000	40	0.0000	1.0000	40
0.0000	1.0000	41	0.0000	1.0000	41	0.0000	1.0000	41
0.0000	1.0000	42	0.0000	1.0000	42	0.0000	1.0000	42
0.0000	1.0000	43	0.0000	1.0000	43	0.0000	1.0000	43
0.0000	1.0000	44	0.0000	1.0000	44	0.0000	1.0000	44
0.0000	1.0000	45	0.0000	1.0000	45	0.0000	1.0000	45

Meridian/Fruitdale Meridian/Fruitdale Meridian/Fruitdale WBL WBL WBL PM PM PM Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.98 Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Plus Project Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 5.5 10 5.3 5.0 0.95 0.95 9 9

Percentile =	0.95	9		Percentile =	0.95	9		Percentile =	0.95	10
		Number of	1			Number of	ll			Number of
Individual	Cumulative	Queued		Individual	Cumulative	Queued		Individual	Cumulative	Queued
Probability	Probability	Vehicles		Probability	Probability	Vehicles		Probability	Probability	Vehicles
0.0069	0.0069	0		0.0052	0.0052	0		0.0042	0.0042	0
0.0343	0.0412	1		0.0275	0.0328	1		0.0228	0.0269	1
0.0854	0.1265	2		0.0723	0.1051	2		0.0625	0.0894	2
0.1416	0.2682	3		0.1266	0.2317	3		0.1142	0.2036	2 3
0.1762	0.4444	4		0.1661	0.3978	4		0.1565	0.3601	4
0.1755	0.6199	5		0.1744	0.5722	5		0.1717	0.5318	5
0.1456	0.7654	6		0.1526	0.7248	6		0.1569	0.6887	6
0.1035	0.8689	7		0.1145	0.8392	7		0.1229	0.8115	7
0.0644	0.9333	8		0.0751	0.9144	8		0.0842	0.8958	8
0.0356	0.9690	9		0.0438	0.9582	9		0.0513	0.9471	9
0.0177	0.9867	10		0.0230	0.9812	10		0.0281	0.9752	10
0.0080	0.9947	11		0.0110	0.9922	11		0.0140	0.9892	11
0.0033	0.9981	12		0.0048	0.9970	12		0.0064	0.9957	12
0.0013	0.9993	13		0.0019	0.9989	13		0.0027	0.9984	13
0.0005	0.9998	14		0.0007	0.9996	14		0.0011	0.9994	14
0.0002	0.9999	15		0.0003	0.9999	15		0.0004	0.9998	15
0.0000	1.0000	16		0.0001	1.0000	16		0.0001	0.9999	16
0.0000	1.0000	17		0.0000	1.0000	17		0.0000	1.0000	17
0.0000	1.0000	18		0.0000	1.0000	18		0.0000	1.0000	18
0.0000	1.0000	19		0.0000	1.0000	19		0.0000	1.0000	19
0.0000	1.0000	20		0.0000	1.0000	20		0.0000	1.0000	20
0.0000	1.0000	21		0.0000	1.0000	21		0.0000	1.0000	21
0.0000	1.0000	22		0.0000	1.0000	22		0.0000	1.0000	22
0.0000	1.0000	23		0.0000	1.0000	23		0.0000	1.0000	23
0.0000	1.0000	24		0.0000	1.0000	24		0.0000	1.0000	24
0.0000	1.0000	25		0.0000	1.0000	25		0.0000	1.0000	25
0.0000	1.0000	26		0.0000	1.0000	26		0.0000	1.0000	26
0.0000	1.0000	27		0.0000	1.0000	27		0.0000	1.0000	27
0.0000	1.0000	28		0.0000	1.0000	28		0.0000	1.0000	28
0.0000	1.0000	29		0.0000	1.0000	29		0.0000	1.0000	29
0.0000	1.0000	30		0.0000	1.0000	30		0.0000	1.0000	30
0.0000	1.0000	31		0.0000	1.0000	31		0.0000	1.0000	31
0.0000	1.0000	32		0.0000	1.0000	32		0.0000	1.0000	32
0.0000	1.0000	33		0.0000	1.0000	33		0.0000	1.0000	33
0.0000	1.0000	34		0.0000	1.0000	34		0.0000	1.0000	34
0.0000	1.0000	35		0.0000	1.0000	35		0.0000	1.0000	35
0.0000	1.0000	36		0.0000	1.0000	36		0.0000	1.0000	36
0.0000	1.0000	37		0.0000	1.0000	37		0.0000	1.0000	37
0.0000	1.0000	38		0.0000	1.0000	38		0.0000	1.0000	38
0.0000	1.0000	39		0.0000	1.0000	39		0.0000	1.0000	39
0.0000	1.0000	40		0.0000	1.0000	40		0.0000	1.0000	40
0.0000	1.0000	41		0.0000	1.0000	41		0.0000	1.0000	41
0.0000	1.0000	42		0.0000	1.0000	42		0.0000	1.0000	42
0.0000	1.0000	43		0.0000	1.0000	43		0.0000	1.0000	43
0.0000	1.0000	44		0.0000	1.0000	44		0.0000	1.0000	44
0.0000	1.0000	45		0.0000	1.0000	45		0.0000	1.0000	45

Meridian/Fruitdale		Meridian/Fruitdale		Meridian/Fruitdale			
EBR		EBR			EBR		
AM		AM			AM		
Existing Conditions		Background Condition	ons		Background Plus Pr	oject Conditions	
Avg. Queue Per Lane in Veh=	9.6	Avg. Queue Per Lan	e in Veh=	11.1	Avg. Queue Per Lar	ne in Veh=	11.4
Percentile = 0.95	15	Percentile =	0.95	17	Percentile =	0.95	17

Percentile =	0.95	15		Percenule =	0.95	17		Percentile =	0.95	17
		Number of	I			Number of	ı			Number of
Individual	Cumulative	Queued		Individual	Cumulative	Queued		Individual	Cumulative	Queued
Probability	Probability	Vehicles	1	Probability	Probability	Vehicles		Probability	Probability	Vehicles
0.0001	0.0001	0	1	0.0000	0.0000	0		0.0000	0.0000	0
0.0007	0.0007	1		0.0002	0.0002	1		0.0001	0.0001	1
0.0031	0.0039	2		0.0009	0.0011	2		0.0007	0.0009	2
0.0100	0.0139	3		0.0034	0.0045	3		0.0028	0.0037	3
0.0241	0.0380	4		0.0095	0.0140	4		0.0079	0.0116	4
0.0462	0.0842	5		0.0211	0.0351	5		0.0181	0.0297	5
0.0739	0.1581	6		0.0390	0.0741	6		0.0343	0.0640	6
0.1012	0.2593	7		0.0620	0.1361	7		0.0558	0.1198	7
0.1214	0.3807	8		0.0861	0.2221	8		0.0795	0.1992	8
0.1293	0.5100	9		0.1063	0.3284	9		0.1006	0.2998	9
0.1240	0.6341	10		0.1181	0.4465	10		0.1145	0.4143	10
0.1082	0.7422	11		0.1193	0.5658	11		0.1186	0.5329	11
0.0864	0.8286	12		0.1105	0.6763	12		0.1125	0.6454	12
0.0638	0.8924	13		0.0944	0.7707	13		0.0986	0.7440	13
0.0437	0.9361	14		0.0750	0.8457	14		0.0802	0.8242	14
0.0279	0.9640	15		0.0555	0.9013	15		0.0609	0.8851	15
0.0167	0.9808	16		0.0386	0.9398	16		0.0434	0.9285	16
0.0094	0.9902	17		0.0252	0.9650	17		0.0290	0.9575	17
0.0050	0.9953	18		0.0156	0.9806	18		0.0184	0.9759	18
0.0025	0.9978	19		0.0091	0.9897	19		0.0110	0.9869	19
0.0012	0.9990	20		0.0051	0.9948	20		0.0063	0.9932	20
0.0006	0.9996	21		0.0027	0.9975	21		0.0034	0.9966	21
0.0002	0.9998	22		0.0014	0.9988	22		0.0018	0.9984	22
0.0001	0.9999	23		0.0007	0.9995	23		0.0009	0.9993	23
0.0000	1.0000	24		0.0003	0.9998	24		0.0004	0.9997	24
0.0000	1.0000	25		0.0001	0.9999	25		0.0002	0.9999	25
0.0000	1.0000	26		0.0001	1.0000	26		0.0001	0.9999	26
0.0000	1.0000	27		0.0000	1.0000	27		0.0000	1.0000	27
0.0000	1.0000	28		0.0000	1.0000	28		0.0000	1.0000	28
0.0000	1.0000	29		0.0000	1.0000	29		0.0000	1.0000	29
0.0000	1.0000	30		0.0000	1.0000	30		0.0000	1.0000	30
0.0000	1.0000	31		0.0000	1.0000	31		0.0000	1.0000	31
0.0000	1.0000	32		0.0000	1.0000	32		0.0000	1.0000	32
0.0000	1.0000	33		0.0000	1.0000	33		0.0000	1.0000	33
0.0000	1.0000	34		0.0000	1.0000	34		0.0000	1.0000	34
0.0000	1.0000	35		0.0000	1.0000	35		0.0000	1.0000	35
0.0000	1.0000	36		0.0000	1.0000	36		0.0000	1.0000	36
0.0000	1.0000	37		0.0000	1.0000	37		0.0000	1.0000	37
0.0000	1.0000	38	1	0.0000	1.0000	38		0.0000	1.0000	38
0.0000	1.0000	39	ĺ	0.0000	1.0000	39		0.0000	1.0000	39
0.0000	1.0000	40	ĺ	0.0000	1.0000	40		0.0000	1.0000	40
0.0000	1.0000	41	1	0.0000	1.0000	41		0.0000	1.0000	41
0.0000	1.0000	42	1	0.0000	1.0000	42		0.0000	1.0000	42
0.0000	1.0000	43	1	0.0000	1.0000	43		0.0000	1.0000	43
0.0000	1.0000	44	1	0.0000	1.0000	44		0.0000	1.0000	44
0.0000	1.0000	45	1	0.0000	1.0000	45		0.0000	1.0000	45

Meridian/Fruitdale		Meridian/Fruitdale		Meridian/Fruitdale			
EBR		EBR			EBR		
PM		PM			PM		
Existing Conditions	Background Condition	ons		Background Plus Pr	oject Conditions		
Avg. Queue Per Lane in Veh=	16.1	Avg. Queue Per Lan	e in Veh=	17.1	Avg. Queue Per Lar	ne in Veh=	17.8
Percentile = 0.95	23	Percentile =	0.95	24	Percentile =	0.95	25

		Number of			Number of			Number of
Individual	Cumulative	Queued	Individual	Cumulative	Queued	Individual	Cumulative	Queued
Probability	Probability	Vehicles	Probability	Probability	Vehicles	Probability	Probability	Vehicles
0.0000	0.0000	0	0.0000	0.0000	0	0.0000	0.0000	0
0.0000	0.0000	1	0.0000	0.0000	1	0.0000	0.0000	1
0.0000	0.0000	2	0.0000	0.0000	2	0.0000	0.0000	2
0.0001	0.0001	3	0.0000	0.0000	3	0.0000	0.0000	3
0.0003	0.0004	4	0.0001	0.0002	4	0.0001	0.0001	4
0.0009	0.0013	5	0.0005	0.0006	5	0.0003	0.0004	5
0.0025	0.0038	6	0.0013	0.0019	6	0.0008	0.0012	6
0.0057	0.0094	7	0.0032	0.0051	7	0.0021	0.0033	7
0.0114	0.0208	8	0.0068	0.0118	8	0.0047	0.0081	8
0.0204	0.0412	9	0.0128	0.0247	9	0.0093	0.0174	9
0.0328	0.0740	10	0.0220	0.0466	10	0.0166	0.0340	10
0.0481	0.1221	11	0.0342	0.0808	11	0.0268	0.0607	11
0.0645	0.1866	12	0.0487	0.1295	12	0.0396	0.1004	12
0.0799	0.2664	13	0.0641	0.1937	13	0.0542	0.1546	13
0.0918	0.3583	14	0.0784	0.2720	14	0.0688	0.2234	14
0.0986	0.4569	15	0.0894	0.3615	15	0.0815	0.3049	15
0.0992	0.5560	16	0.0956	0.4571	16	0.0905	0.3954	16
0.0939	0.6500	17	0.0962	0.5533	17	0.0947	0.4901	17
0.0840	0.7340	18	0.0915	0.6448	18	0.0935	0.5836	18
0.0712	0.8052	19	0.0824	0.7272	19	0.0874	0.6710	19
0.0573	0.8625	20	0.0705	0.7977	20	0.0777	0.7487	20
0.0439	0.9064	21	0.0574	0.8552	21	0.0657	0.8144	21
0.0322	0.9386	22	0.0447	0.8998	22	0.0531	0.8675	22
0.0225	0.9611	23	0.0332	0.9331	23	0.0410	0.9086	23
0.0151	0.9762	24	0.0237	0.9568	24	0.0304	0.9389	24
0.0097	0.9859	25	0.0162	0.9730	25	0.0216	0.9605	25
0.0060	0.9920	26	0.0107	0.9837	26	0.0148	0.9753	26
0.0036	0.9955	27	0.0068	0.9904	27	0.0097	0.9850	27
0.0021	0.9976	28	0.0041	0.9946	28	0.0062	0.9912	28
0.0011	0.9988	29	0.0024	0.9970	29	0.0038	0.9950	29
0.0006	0.9994	30	0.0014	0.9984	30	0.0022	0.9972	30
0.0003	0.9997	31	0.0008	0.9992	31	0.0013	0.9985	31
0.0002	0.9999	32	0.0004	0.9996	32	0.0007	0.9992	32
0.0001	0.9999	33	0.0002	0.9998	33	0.0004	0.9996	33
0.0000	1.0000	34	0.0001	0.9999	34	0.0002	0.9998	34
0.0000	1.0000	35	0.0001	1.0000	35	0.0001	0.9999	35
0.0000	1.0000	36	0.0000	1.0000	36	0.0001	1.0000	36
0.0000	1.0000	37	0.0000	1.0000	37	0.0000	1.0000	37
0.0000	1.0000	38	0.0000	1.0000	38	0.0000	1.0000	38
0.0000	1.0000	39	0.0000	1.0000	39	0.0000	1.0000	39
0.0000	1.0000	40	0.0000	1.0000	40	0.0000	1.0000	40
0.0000	1.0000	41	0.0000	1.0000	41	0.0000	1.0000	41
0.0000	1.0000	42	0.0000	1.0000	42	0.0000	1.0000	42
0.0000	1.0000	43	0.0000	1.0000	43	0.0000	1.0000	43
0.0000	1.0000	44	0.0000	1.0000	44	0.0000	1.0000	44
0.0000	1.0000	45	0.0000	1.0000	45	0.0000	1.0000	45

Southwest/Fruitdale Southwest/Fruitdale Southwest/Fruitdale SBL SBL SBL AM AM AM Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Plus Project Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 3.0 6 2.7 2.9 0.95 6 0.95 6

Percentile =	0.95	0		Percentile =	0.95	0	Percentile =	0.95	б
		Number of	1			Number of			Number of
Individual	Cumulative	Queued		Individual	Cumulative	Queued	Individual	Cumulative	Queued
Probability	Probability	Vehicles		Probability	Probability	Vehicles	Probability	Probability	Vehicles
0.0645	0.0645	0		0.0531	0.0531	0	0.0501	0.0501	0
0.1767	0.2412	1		0.1558	0.2089	1	0.1499	0.2000	1
0.2423	0.4835	2		0.2288	0.4377	2	0.2245	0.4244	2
0.2214	0.7049	3		0.2239	0.6615	3	0.2240	0.6485	2 3
0.1518	0.8566	4		0.1643	0.8259	4	0.1677	0.8162	4
0.0832	0.9399	5		0.0965	0.9224	5	0.1004	0.9166	5
0.0380	0.9779	6		0.0472	0.9696	6	0.0501	0.9668	6
0.0149	0.9928	7		0.0198	0.9894	7	0.0214	0.9882	7
0.0051	0.9979	8		0.0073	0.9967	8	0.0080	0.9962	8
0.0016	0.9994	9		0.0024	0.9991	9	0.0027	0.9989	9
0.0004	0.9999	10		0.0007	0.9998	10	0.0008	0.9997	10
0.0001	1.0000	11		0.0002	0.9999	11	0.0002	0.9999	11
0.0000	1.0000	12		0.0000	1.0000	12	0.0001	1.0000	12
0.0000	1.0000	13		0.0000	1.0000	13	0.0000	1.0000	13
0.0000	1.0000	14		0.0000	1.0000	14	0.0000	1.0000	14
0.0000	1.0000	15		0.0000	1.0000	15	0.0000	1.0000	15
0.0000	1.0000	16		0.0000	1.0000	16	0.0000	1.0000	16
0.0000	1.0000	17		0.0000	1.0000	17	0.0000	1.0000	17
0.0000	1.0000	18		0.0000	1.0000	18	0.0000	1.0000	18
0.0000	1.0000	19		0.0000	1.0000	19	0.0000	1.0000	19
0.0000	1.0000	20		0.0000	1.0000	20	0.0000	1.0000	20
0.0000	1.0000	21		0.0000	1.0000	21	0.0000	1.0000	21
0.0000	1.0000	22		0.0000	1.0000	22	0.0000	1.0000	22
0.0000	1.0000	23		0.0000	1.0000	23	0.0000	1.0000	23
0.0000	1.0000	24		0.0000	1.0000	24	0.0000	1.0000	24
0.0000	1.0000	25		0.0000	1.0000	25	0.0000	1.0000	25
0.0000	1.0000	26		0.0000	1.0000	26	0.0000	1.0000	26
0.0000	1.0000	27		0.0000	1.0000	27	0.0000	1.0000	27
0.0000	1.0000	28		0.0000	1.0000	28	0.0000	1.0000	28
0.0000	1.0000	29		0.0000	1.0000	29	0.0000	1.0000	29
0.0000	1.0000	30		0.0000	1.0000	30	0.0000	1.0000	30
0.0000	1.0000	31		0.0000	1.0000	31	0.0000	1.0000	31
0.0000	1.0000	32		0.0000	1.0000	32	0.0000	1.0000	32
0.0000	1.0000	33		0.0000	1.0000	33	0.0000	1.0000	33
0.0000	1.0000	34		0.0000	1.0000	34	0.0000	1.0000	34
0.0000	1.0000	35		0.0000	1.0000	35	0.0000	1.0000	35
0.0000	1.0000	36		0.0000	1.0000	36	0.0000	1.0000	36
0.0000	1.0000	37		0.0000	1.0000	37	0.0000	1.0000	37
0.0000	1.0000	38		0.0000	1.0000	38	0.0000	1.0000	38
0.0000	1.0000	39		0.0000	1.0000	39	0.0000	1.0000	39
0.0000	1.0000	40		0.0000	1.0000	40	0.0000	1.0000	40
0.0000	1.0000	41		0.0000	1.0000	41	0.0000	1.0000	41
0.0000	1.0000	42		0.0000	1.0000	42	0.0000	1.0000	42
0.0000	1.0000	43		0.0000	1.0000	43	0.0000	1.0000	43
0.0000	1.0000	44		0.0000	1.0000	44	0.0000	1.0000	44
0.0000	1.0000	45	1	0.0000	1.0000	45	0.0000	1.0000	45

Southwest/Fruitdale Southwest/Fruitdale Southwest/Fruitdale SBL SBL SBL PM PM PM Background Plus Project Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 4.2 8 3.9 4.0 0.95 0.95 7 8

Percentile =	0.95	7	Percentile =	0.95	8	ŀ	Percentile =	0.95	8
Individual Probability	Cumulative Probability	Number of Queued Vehicles	Individual Probability	Cumulative Probability	Number of Queued Vehicles		Individual Probability	Cumulative Probability	Number of Queued Vehicles
0.0193	0.0193	0	0.0177	0.0177	0		0.0147	0.0147	0
0.0762	0.0955	1	0.0715	0.0892	1		0.0619	0.0766	1
0.1504	0.2459	2	0.1442	0.2334	2		0.1307	0.2073	2
0.1979	0.4437	3	0.1938	0.4272	3		0.1840	0.3913	3
0.1953	0.6390	4	0.1953	0.6225	4		0.1942	0.5855	4
0.1542	0.7932	5	0.1575	0.7801	5		0.1640	0.7495	5
0.1015	0.8947	6	0.1059	0.8859	6		0.1154	0.8649	6
0.0572	0.9519	7	0.0610	0.9469	7		0.0696	0.9345	7
0.0282	0.9802	8	0.0307	0.9777	8		0.0367	0.9713	8
0.0124	0.9925	9	0.0138	0.9914	9		0.0172	0.9885	9
0.0049	0.9974	10	0.0056	0.9970	10		0.0073	0.9958	10
0.0018	0.9992	11	0.0020	0.9990	11		0.0028	0.9986	11
0.0006	0.9998	12	0.0007	0.9997	12		0.0010	0.9995	12
0.0002	0.9999	13	0.0002	0.9999	13		0.0003	0.9999	13
0.0000	1.0000	14	0.0001	1.0000	14		0.0001	1.0000	14
0.0000	1.0000	15	0.0000	1.0000	15		0.0000	1.0000	15
0.0000	1.0000	16	0.0000	1.0000	16		0.0000	1.0000	16
0.0000	1.0000	17	0.0000	1.0000	17		0.0000	1.0000	17
0.0000	1.0000	18	0.0000	1.0000	18		0.0000	1.0000	18
0.0000	1.0000	19	0.0000	1.0000	19		0.0000	1.0000	19
0.0000	1.0000	20	0.0000	1.0000	20		0.0000	1.0000	20
0.0000	1.0000	21	0.0000	1.0000	21		0.0000	1.0000	21
0.0000	1.0000	22	0.0000	1.0000	22		0.0000	1.0000	22
0.0000	1.0000	23	0.0000	1.0000	23		0.0000	1.0000	23
0.0000	1.0000	24	0.0000	1.0000	24		0.0000	1.0000	24
0.0000	1.0000	25	0.0000	1.0000	25		0.0000	1.0000	25
0.0000	1.0000	26	0.0000	1.0000	26		0.0000	1.0000	26
0.0000	1.0000	27	0.0000	1.0000	27		0.0000	1.0000	27
0.0000	1.0000	28	0.0000	1.0000	28		0.0000	1.0000	28
0.0000	1.0000	29	0.0000	1.0000	29		0.0000	1.0000	29
0.0000	1.0000	30	0.0000	1.0000	30		0.0000	1.0000	30
0.0000	1.0000	31	0.0000	1.0000	31		0.0000	1.0000	31
0.0000	1.0000	32	0.0000	1.0000	32		0.0000	1.0000	32
0.0000	1.0000	33	0.0000	1.0000	33		0.0000	1.0000	33
0.0000	1.0000	34	0.0000	1.0000	34		0.0000	1.0000	34
0.0000	1.0000	35	0.0000	1.0000	35		0.0000	1.0000	35
0.0000	1.0000	36	0.0000	1.0000	36		0.0000	1.0000	36
0.0000	1.0000	37	0.0000	1.0000	37		0.0000	1.0000	37
0.0000	1.0000	38	0.0000	1.0000	38		0.0000	1.0000	38
0.0000	1.0000	39	0.0000	1.0000	39		0.0000	1.0000	39
0.0000	1.0000	40	0.0000	1.0000	40		0.0000	1.0000	40
0.0000	1.0000	41	0.0000	1.0000	41		0.0000	1.0000	41
0.0000	1.0000	42	0.0000	1.0000	42		0.0000	1.0000	42
0.0000	1.0000	43	0.0000	1.0000	43		0.0000	1.0000	43
0.0000	1.0000	44	0.0000	1.0000	44		0.0000	1.0000	44
0.0000	1.0000	45	0.0000	1.0000	45		0.0000	1.0000	45

Meridian/Project Access Meridian/Project Access Meridian/Project Access **NBL** NBL NBL AM AM AM Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Plus Project Conditions Avg. Queue Per Lane in Veh= Percentile = 0.95 Background Conditions Avg. Queue Per Lane in Veh= 0.0 0.0 0.0 Percentile = 0.95 0.95 

Percentile =	0.95	171	Percentile =	0.95	171	Percentile =	0.95
Individual Probability	Cumulative Probability	Number of Queued Vehicles	Individual Probability	Cumulative Probability	Number of Queued Vehicles	Individual Probability	Cumulative Probability
•	,		1	,		,	,
#NUM!	#NUM!	0	#NUM!	#NUM!	0	0.9946	0.9946
0.0000	#NUM!	1	0.0000	#NUM!	1	0.0054	1.0000
0.0000	#NUM!	2	0.0000	#NUM!	2	0.0000	1.0000
0.0000	#NUM!	3	0.0000	#NUM!	3	0.0000	1.0000
0.0000	#NUM!	4	0.0000	#NUM!	4	0.0000	1.0000
0.0000	#NUM!	5	0.0000	#NUM!	5	0.0000	1.0000
0.0000	#NUM!	6	0.0000	#NUM!	6	0.0000	1.0000
0.0000	#NUM!	7	0.0000	#NUM!	7	0.0000	1.0000
0.0000	#NUM!	8	0.0000	#NUM!	8	0.0000	1.0000
0.0000	#NUM!	9	0.0000	#NUM!	9	0.0000	1.0000
0.0000	#NUM!	10	0.0000	#NUM!	10	0.0000	1.0000
0.0000	#NUM!	11	0.0000	#NUM!	11	0.0000	1.0000
0.0000	#NUM!	12	0.0000	#NUM!	12	0.0000	1.0000
0.0000	#NUM!	13	0.0000	#NUM!	13	0.0000	1.0000
0.0000	#NUM!	14	0.0000	#NUM!	14	0.0000	1.0000
0.0000	#NUM!	15	0.0000	#NUM!	15	0.0000	1.0000
0.0000	#NUM!	16	0.0000	#NUM!	16	0.0000	1.0000
0.0000	#NUM!	17	0.0000	#NUM!	17	0.0000	1.0000
0.0000	#NUM!	18	0.0000	#NUM!	18	0.0000	1.0000
0.0000	#NUM!	19	0.0000	#NUM!	19	0.0000	1.0000
0.0000	#NUM!	20	0.0000	#NUM!	20	0.0000	1.0000
0.0000	#NUM!	21	0.0000	#NUM!	21	0.0000	1.0000
0.0000	#NUM!	22	0.0000	#NUM!	22	0.0000	1.0000
0.0000	#NUM!	23	0.0000	#NUM!	23	0.0000	1.0000
0.0000	#NUM!	24	0.0000	#NUM!	24	0.0000	1.0000
0.0000	#NUM!	25	0.0000	#NUM!	25	0.0000	1.0000
0.0000	#NUM!	26	0.0000	#NUM!	26	0.0000	1.0000
0.0000	#NUM!	27	0.0000	#NUM!	27	0.0000	1.0000
0.0000	#NUM!	28	0.0000	#NUM!	28	0.0000	1.0000
0.0000	#NUM!	29	0.0000	#NUM!	29	0.0000	1.0000
0.0000	#NUM!	30	0.0000	#NUM!	30	0.0000	1.0000
0.0000	#NUM!	31	0.0000	#NUM!	31	0.0000	1.0000
0.0000	#NUM!	32	0.0000	#NUM!	32	0.0000	1.0000
0.0000	#NUM!	33	0.0000	#NUM!	33	0.0000	1.0000
0.0000	#NUM!	34	0.0000	#NUM!	34	0.0000	1.0000
0.0000	#NUM!	35	0.0000	#NUM!	35	0.0000	1.0000
0.0000	#NUM!	36	0.0000	#NUM!	36	0.0000	1.0000
0.0000	#NUM!	37	0.0000	#NUM!	36 37	0.0000	1.0000
		38			38		
0.0000 0.0000	#NUM!	38	0.0000	#NUM!	38 39	0.0000 0.0000	1.0000 1.0000
	#NUM!	39 40	0.0000	#NUM!	39 40		
0.0000	#NUM!		0.0000	#NUM!		0.0000	1.0000
0.0000	#NUM!	41	0.0000	#NUM!	41	0.0000	1.0000
0.0000	#NUM!	42	0.0000	#NUM!	42	0.0000	1.0000
0.0000	#NUM!	43	0.0000	#NUM!	43	0.0000	1.0000
0.0000	#NUM!	44	0.0000	#NUM!	44 45	0.0000	1.0000
0.0000	#NUM!	45	0.0000	#NUM!	45	0.0000	1.0000

Meridian/Project Access Meridian/Project Access Meridian/Project Access NBL NBL NBL PM PM PM Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.99 Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.9 Background Plus Project Conditions Avg. Queue Per Lane in Veh= Percentile = 0.95 0.0 0.0 0.0 0.95 171 0.95 171

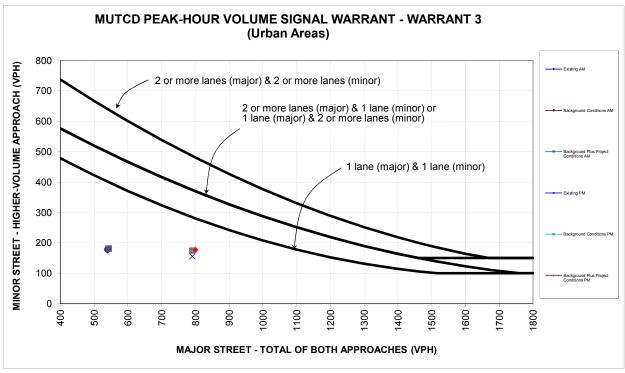
Probability   Probability   Vehicles   Probability   Pro	Percentile =	0.95	171	Percentile =	0.95	171	Percentile =	0.95	
#NUM! #NUM! 0 #NUM! 1 0 0 0.9756 0 0.0000 #NUM! 1 0.0000 #NUM! 2 0.0000 #NUM! 2 0.0000 #NUM! 2 0.0000 #NUM! 2 0.0000 #NUM! 3 0.0000 #NUM! 3 0.0000 #NUM! 3 0.0000 #NUM! 4 0.0000 1 0.0000 #NUM! 5 0.0000 #NUM! 4 0.0000 1 0.0000 #NUM! 5 0.0000 #NUM! 5 0.0000 #NUM! 5 0.0000 #NUM! 6 0.0000 #NUM! 6 0.0000 #NUM! 7 0.0000 #NUM! 7 0.0000 #NUM! 7 0.0000 #NUM! 8 0.0000 #NUM! 8 0.0000 #NUM! 9 0.0000 #NUM! 9 0.0000 #NUM! 9 0.0000 #NUM! 10 0.0000 #NUM! 11 0.0000 #NUM! 11 0.0000 #NUM! 12 0.0000 #NUM! 12 0.0000 #NUM! 12 0.0000 #NUM! 12 0.0000 #NUM! 14 0.0000 #NUM! 14 0.0000 #NUM! 15 0.0000 #NUM! 16 0.0000 #NUM! 17 0.0000 #NUM! 17 0.0000 #NUM! 18 0.0000 #NUM! 19 0.0000 #NUM! 19 0.0000 #NUM! 19 0.0000 #NUM! 19 0.0000 #NUM! 10 0.0000 #NUM! 11 0.00000 #NUM! 11 0.0000 #NUM! 11 0.0000 #NUM! 11 0.0000 #NUM! 11 0.0000 #NUM! 11	Individual	Cumulative		Individual	Cumulative		Individual	Cumulative	Nu G
0.0000	Probability	Probability	Vehicles	Probability	Probability	Vehicles	Probability	Probability	V
0.0000	#NUM!	#NUM!	0	#NUM!	#NUM!	0	0.9756	0.9756	
0.0000	0.0000	#NUM!		0.0000	#NUM!	1	0.0241	0.9997	
0.0000	0.0000	#NUM!	2	0.0000	#NUM!	2	0.0003	1.0000	
0.0000 #NUM! 5 0.0000 #NUM! 5 0.0000 1 0.0000 #NUM! 5 0.0000 #NUM! 5 0.0000 1 0.0000 #NUM! 6 0.0000 #NUM! 7 0.0000 1 0.0000 #NUM! 7 0.0000 #NUM! 7 0.0000 1 0.0000 #NUM! 8 0.0000 #NUM! 7 0.0000 1 0.0000 #NUM! 9 0.0000 #NUM! 9 0.0000 1 0.0000 #NUM! 10 0.0000 #NUM! 10 0.0000 1 0.0000 #NUM! 11 0.0000 #NUM! 11 0.0000 1 0.0000 #NUM! 12 0.0000 #NUM! 12 0.0000 1 0.0000 #NUM! 13 0.0000 #NUM! 13 0.0000 1 0.0000 #NUM! 15 0.0000 #NUM! 15 0.0000 1 0.0000 #NUM! 15 0.0000 #NUM! 15 0.0000 1 0.0000 #NUM! 16 0.0000 #NUM! 17 0.0000 1 0.0000 #NUM! 17 0.0000 #NUM! 16 0.0000 1 0.0000 #NUM! 18 0.0000 #NUM! 17 0.0000 1 0.0000 #NUM! 18 0.0000 #NUM! 19 0.0000 1 0.0000 #NUM! 18 0.0000 #NUM! 19 0.0000 1 0.0000 #NUM! 18 0.0000 #NUM! 19 0.0000 1 0.0000 #NUM! 20 0.0000 #NUM! 21 0.0000 1 0.0000 #NUM! 21 0.0000 #NUM! 22 0.0000 1 0.0000 #NUM! 21 0.0000 #NUM! 22 0.0000 1 0.0000 #NUM! 22 0.0000 #NUM! 21 0.0000 1 0.0000 #NUM! 22 0.0000 #NUM! 22 0.0000 1 0.0000 #NUM! 23 0.0000 #NUM! 21 0.0000 1 0.0000 #NUM! 23 0.0000 #NUM! 24 0.0000 1 0.0000 #NUM! 23 0.0000 #NUM! 25 0.0000 1 0.0000 #NUM! 24 0.0000 #NUM! 25 0.0000 1 0.0000 #NUM! 26 0.0000 #NUM! 27 0.0000 1 0.0000 #NUM! 28 0.0000 #NUM! 26 0.0000 1 0.0000 #NUM! 28 0.0000 #NUM! 29 0.0000 1 0.0000 #NUM! 31 0.0000 #NUM! 32 0.0000 1 0.0000 #NUM! 34 0.0000 #NUM! 35 0.0000 1 0.0000 #NUM! 36 0.0000 #NUM! 37 0.0000 1 0.0000 #NUM! 38 0.0000 #NUM! 38 0.0000 1 0.0000 #NUM! 39 0.0000 #NUM! 39 0.0000 1 0.0000 #NUM! 39 0.0000 #NUM! 30 0.0000 #NUM! 30 0.0000 1 0.0000 #NUM! 39 0.0000 #NUM! 40 0.0000 #NUM! 40 0.00000 #NUM!					#NUM!			1.0000	
0.0000	0.0000	#NUM!	4	0.0000	#NUM!	4	0.0000	1.0000	
0.0000	0.0000	#NUM!	5	0.0000	#NUM!	5	0.0000	1.0000	
0.0000	0.0000	#NUM!	6	0.0000	#NUM!	6	0.0000	1.0000	
0.0000	0.0000	#NUM!	7	0.0000	#NUM!		0.0000	1.0000	
0.0000	0.0000	#NUM!		0.0000	#NUM!		0.0000	1.0000	
0.0000	0.0000	#NUM!	9	0.0000	#NUM!		0.0000	1.0000	
0.0000	0.0000	#NUM!		0.0000			0.0000	1.0000	
0.0000						11		1.0000	
0.0000	0.0000	#NUM!			#NUM!		0.0000	1.0000	
0.0000								1.0000	
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0.0000         #NUM!         19         0.0000         #NUM!         19         0.0000         #NUM!         20         0.0000         1           0.0000         #NUM!         20         0.0000         #NUM!         21         0.0000         1           0.0000         #NUM!         21         0.0000         #NUM!         21         0.0000         1           0.0000         #NUM!         22         0.0000         #NUM!         22         0.0000         1           0.0000         #NUM!         23         0.0000         #NUM!         23         0.0000         1           0.0000         #NUM!         24         0.0000         #NUM!         24         0.0000         1           0.0000         #NUM!         25         0.0000         #NUM!         25         0.0000         1           0.0000         #NUM!         26         0.0000         #NUM!         27         0.0000         1           0.0000         #NUM!         28         0.0000         #NUM!         28         0.0000         1           0.0000         #NUM!         29         0.0000         #NUM!         30         0.0000         1								1.0000	
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0.0000         #NUM!         21         0.0000         #NUM!         21         0.0000         1           0.0000         #NUM!         22         0.0000         #NUM!         22         0.0000         1           0.0000         #NUM!         23         0.0000         #NUM!         23         0.0000         1           0.0000         #NUM!         24         0.0000         #NUM!         24         0.0000         1           0.0000         #NUM!         25         0.0000         #NUM!         25         0.0000         1           0.0000         #NUM!         26         0.0000         #NUM!         26         0.0000         1           0.0000         #NUM!         27         0.0000         #NUM!         27         0.0000         1           0.0000         #NUM!         28         0.0000         #NUM!         28         0.0000         1           0.0000         #NUM!         29         0.0000         #NUM!         29         0.0000         1           0.0000         #NUM!         30         0.0000         #NUM!         31         0.0000         1           0.0000         #NUM!         32								1.0000	
0.0000         #NUM!         22         0.0000         #NUM!         22         0.0000         1           0.0000         #NUM!         23         0.0000         #NUM!         23         0.0000         1           0.0000         #NUM!         24         0.0000         #NUM!         24         0.0000         1           0.0000         #NUM!         25         0.0000         #NUM!         25         0.0000         1           0.0000         #NUM!         26         0.0000         #NUM!         26         0.0000         1           0.0000         #NUM!         27         0.0000         #NUM!         27         0.0000         1           0.0000         #NUM!         28         0.0000         #NUM!         28         0.0000         1           0.0000         #NUM!         29         0.0000         #NUM!         29         0.0000         1           0.0000         #NUM!         30         0.0000         #NUM!         30         0.0000         1           0.0000         #NUM!         31         0.0000         #NUM!         31         0.0000         1           0.0000         #NUM!         32		_						1.0000	
0.0000         #NUM!         23         0.0000         #NUM!         23         0.0000         1           0.0000         #NUM!         24         0.0000         #NUM!         24         0.0000         1           0.0000         #NUM!         25         0.0000         #NUM!         25         0.0000         1           0.0000         #NUM!         26         0.0000         #NUM!         26         0.0000         1           0.0000         #NUM!         27         0.0000         #NUM!         27         0.0000         1           0.0000         #NUM!         28         0.0000         #NUM!         28         0.0000         1           0.0000         #NUM!         29         0.0000         #NUM!         29         0.0000         1           0.0000         #NUM!         30         0.0000         #NUM!         30         0.0000         1           0.0000         #NUM!         31         0.0000         #NUM!         31         0.0000         1           0.0000         #NUM!         32         0.0000         #NUM!         32         0.0000         1           0.0000         #NUM!         34								1.0000	
0.0000         #NUM!         24         0.0000         #NUM!         24         0.0000         1           0.0000         #NUM!         25         0.0000         #NUM!         25         0.0000         1           0.0000         #NUM!         26         0.0000         #NUM!         26         0.0000         1           0.0000         #NUM!         27         0.0000         #NUM!         27         0.0000         1           0.0000         #NUM!         28         0.0000         #NUM!         28         0.0000         1           0.0000         #NUM!         29         0.0000         #NUM!         29         0.0000         1           0.0000         #NUM!         30         0.0000         #NUM!         30         0.0000         1           0.0000         #NUM!         31         0.0000         #NUM!         31         0.0000         1           0.0000         #NUM!         32         0.0000         #NUM!         32         0.0000         1           0.0000         #NUM!         33         0.0000         #NUM!         34         0.0000         1           0.0000         #NUM!         34						23		1.0000	
0.0000         #NUM!         25         0.0000         #NUM!         25         0.0000         1           0.0000         #NUM!         26         0.0000         #NUM!         26         0.0000         1           0.0000         #NUM!         27         0.0000         #NUM!         27         0.0000         1           0.0000         #NUM!         28         0.0000         #NUM!         28         0.0000         1           0.0000         #NUM!         29         0.0000         #NUM!         29         0.0000         1           0.0000         #NUM!         30         0.0000         #NUM!         30         0.0000         1           0.0000         #NUM!         31         0.0000         #NUM!         31         0.0000         1           0.0000         #NUM!         32         0.0000         #NUM!         32         0.0000         1           0.0000         #NUM!         33         0.0000         #NUM!         34         0.0000         1           0.0000         #NUM!         34         0.0000         #NUM!         34         0.0000         1           0.0000         #NUM!         35								1.0000	
0.0000         #NUM!         26         0.0000         #NUM!         26         0.0000         1           0.0000         #NUM!         27         0.0000         #NUM!         27         0.0000         1           0.0000         #NUM!         28         0.0000         #NUM!         28         0.0000         1           0.0000         #NUM!         29         0.0000         #NUM!         29         0.0000         1           0.0000         #NUM!         30         0.0000         #NUM!         30         0.0000         1           0.0000         #NUM!         31         0.0000         #NUM!         31         0.0000         1           0.0000         #NUM!         32         0.0000         #NUM!         32         0.0000         1           0.0000         #NUM!         33         0.0000         #NUM!         33         0.0000         1           0.0000         #NUM!         34         0.0000         #NUM!         34         0.0000         1           0.0000         #NUM!         35         0.0000         #NUM!         35         0.0000         1           0.0000         #NUM!         36								1.0000	
0.0000         #NUM!         27         0.0000         #NUM!         27         0.0000         1           0.0000         #NUM!         28         0.0000         #NUM!         28         0.0000         1           0.0000         #NUM!         29         0.0000         #NUM!         29         0.0000         1           0.0000         #NUM!         30         0.0000         #NUM!         30         0.0000         1           0.0000         #NUM!         31         0.0000         #NUM!         31         0.0000         1           0.0000         #NUM!         32         0.0000         #NUM!         32         0.0000         1           0.0000         #NUM!         33         0.0000         #NUM!         33         0.0000         1           0.0000         #NUM!         34         0.0000         #NUM!         34         0.0000         1           0.0000         #NUM!         35         0.0000         #NUM!         35         0.0000         1           0.0000         #NUM!         36         0.0000         #NUM!         36         0.0000         1           0.0000         #NUM!         37								1.0000	
0.0000         #NUM!         28         0.0000         #NUM!         28         0.0000         1           0.0000         #NUM!         29         0.0000         #NUM!         29         0.0000         1           0.0000         #NUM!         30         0.0000         #NUM!         30         0.0000         1           0.0000         #NUM!         31         0.0000         #NUM!         31         0.0000         1           0.0000         #NUM!         32         0.0000         #NUM!         32         0.0000         1           0.0000         #NUM!         33         0.0000         #NUM!         33         0.0000         1           0.0000         #NUM!         34         0.0000         #NUM!         34         0.0000         1           0.0000         #NUM!         35         0.0000         #NUM!         35         0.0000         1           0.0000         #NUM!         36         0.0000         #NUM!         36         0.0000         1           0.0000         #NUM!         37         0.0000         #NUM!         37         0.0000         1           0.0000         #NUM!         38						27		1.0000	
0.0000         #NUM!         29         0.0000         #NUM!         29         0.0000         1           0.0000         #NUM!         30         0.0000         #NUM!         30         0.0000         1           0.0000         #NUM!         31         0.0000         #NUM!         31         0.0000         1           0.0000         #NUM!         32         0.0000         #NUM!         32         0.0000         1           0.0000         #NUM!         33         0.0000         #NUM!         33         0.0000         1           0.0000         #NUM!         34         0.0000         #NUM!         34         0.0000         1           0.0000         #NUM!         35         0.0000         #NUM!         35         0.0000         1           0.0000         #NUM!         36         0.0000         #NUM!         36         0.0000         1           0.0000         #NUM!         37         0.0000         #NUM!         37         0.0000         1           0.0000         #NUM!         38         0.0000         #NUM!         38         0.0000         1           0.0000         #NUM!         39								1.0000	
0.0000         #NUM!         30         0.0000         #NUM!         30         0.0000         1           0.0000         #NUM!         31         0.0000         #NUM!         31         0.0000         1           0.0000         #NUM!         32         0.0000         #NUM!         32         0.0000         1           0.0000         #NUM!         33         0.0000         #NUM!         33         0.0000         1           0.0000         #NUM!         34         0.0000         #NUM!         34         0.0000         1           0.0000         #NUM!         35         0.0000         #NUM!         35         0.0000         1           0.0000         #NUM!         36         0.0000         #NUM!         36         0.0000         1           0.0000         #NUM!         37         0.0000         #NUM!         37         0.0000         1           0.0000         #NUM!         38         0.0000         #NUM!         38         0.0000         1           0.0000         #NUM!         39         0.0000         #NUM!         40         0.0000         1		_			-			1.0000	
0.0000         #NUM!         31         0.0000         #NUM!         31         0.0000         1           0.0000         #NUM!         32         0.0000         #NUM!         32         0.0000         1           0.0000         #NUM!         33         0.0000         #NUM!         33         0.0000         1           0.0000         #NUM!         34         0.0000         #NUM!         34         0.0000         1           0.0000         #NUM!         35         0.0000         #NUM!         35         0.0000         1           0.0000         #NUM!         36         0.0000         #NUM!         36         0.0000         1           0.0000         #NUM!         37         0.0000         #NUM!         37         0.0000         1           0.0000         #NUM!         38         0.0000         #NUM!         38         0.0000         1           0.0000         #NUM!         39         0.0000         #NUM!         40         0.0000         1								1.0000	
0.0000         #NUM!         32         0.0000         #NUM!         32         0.0000         1           0.0000         #NUM!         33         0.0000         #NUM!         33         0.0000         1           0.0000         #NUM!         34         0.0000         #NUM!         34         0.0000         1           0.0000         #NUM!         35         0.0000         #NUM!         35         0.0000         1           0.0000         #NUM!         36         0.0000         #NUM!         36         0.0000         1           0.0000         #NUM!         37         0.0000         #NUM!         37         0.0000         1           0.0000         #NUM!         38         0.0000         #NUM!         38         0.0000         1           0.0000         #NUM!         39         0.0000         #NUM!         39         0.0000         1           0.0000         #NUM!         40         0.0000         #NUM!         40         0.0000         1								1.0000	
0.0000         #NUM!         33         0.0000         #NUM!         33         0.0000         1           0.0000         #NUM!         34         0.0000         #NUM!         34         0.0000         1           0.0000         #NUM!         35         0.0000         #NUM!         35         0.0000         1           0.0000         #NUM!         36         0.0000         #NUM!         36         0.0000         1           0.0000         #NUM!         37         0.0000         #NUM!         37         0.0000         1           0.0000         #NUM!         38         0.0000         #NUM!         38         0.0000         1           0.0000         #NUM!         39         0.0000         #NUM!         39         0.0000         1           0.0000         #NUM!         40         0.0000         #NUM!         40         0.0000         1								1.0000	
0.0000     #NUM!     34     0.0000     #NUM!     34     0.0000     1       0.0000     #NUM!     35     0.0000     #NUM!     35     0.0000     1       0.0000     #NUM!     36     0.0000     #NUM!     36     0.0000     1       0.0000     #NUM!     37     0.0000     #NUM!     37     0.0000     1       0.0000     #NUM!     38     0.0000     #NUM!     38     0.0000     1       0.0000     #NUM!     39     0.0000     1       0.0000     #NUM!     40     0.0000     1       0.0000     #NUM!     40     0.0000     1						33		1.0000	
0.0000     #NUM!     35     0.0000     #NUM!     35     0.0000     1       0.0000     #NUM!     36     0.0000     #NUM!     36     0.0000     1       0.0000     #NUM!     37     0.0000     #NUM!     37     0.0000     1       0.0000     #NUM!     38     0.0000     #NUM!     38     0.0000     1       0.0000     #NUM!     39     0.0000     #NUM!     39     0.0000     1       0.0000     #NUM!     40     0.0000     #NUM!     40     0.0000     1								1.0000	
0.0000     #NUM!     36     0.0000     #NUM!     36     0.0000     1       0.0000     #NUM!     37     0.0000     #NUM!     37     0.0000     1       0.0000     #NUM!     38     0.0000     #NUM!     38     0.0000     1       0.0000     #NUM!     39     0.0000     #NUM!     39     0.0000     1       0.0000     #NUM!     40     0.0000     #NUM!     40     0.0000     1						35		1.0000	
0.0000     #NUM!     37     0.0000     #NUM!     37     0.0000     1       0.0000     #NUM!     38     0.0000     #NUM!     38     0.0000     1       0.0000     #NUM!     39     0.0000     #NUM!     39     0.0000     1       0.0000     #NUM!     40     0.0000     #NUM!     40     0.0000     1								1.0000	
0.0000     #NUM!     38     0.0000     #NUM!     38     0.0000     1       0.0000     #NUM!     39     0.0000     #NUM!     39     0.0000     1       0.0000     #NUM!     40     0.0000     #NUM!     40     0.0000     1								1.0000	
0.0000     #NUM!     39     0.0000     #NUM!     39     0.0000     1       0.0000     #NUM!     40     0.0000     1			-					1.0000	
0.0000 #NUM! 40 0.0000 #NUM! 40 0.0000 1						39		1.0000	1
								1.0000	1
								1.0000	l
								1.0000	l
								1.0000	1
								1.0000	1
1 1 1								1.0000	1

Percentile =	0.95	1
		Number of
Individual	Cumulative	Queued
Probability	Probability	Vehicles
0.9756	0.9756	0
0.0241	0.9997	1
0.0003	1.0000	2
0.0000	1.0000	3
0.0000	1.0000	4
0.0000	1.0000	5
0.0000	1.0000	6
0.0000	1.0000	7
0.0000	1.0000	8
0.0000	1.0000	9
0.0000	1.0000	10
0.0000	1.0000	11
0.0000	1.0000	12
0.0000 0.0000	1.0000 1.0000	13 14
0.0000	1.0000	15
0.0000	1.0000	16
0.0000	1.0000	17
0.0000	1.0000	18
0.0000	1.0000	19
0.0000	1.0000	20
0.0000	1.0000	21
0.0000	1.0000	22
0.0000	1.0000	23
0.0000	1.0000	24
0.0000	1.0000	25
0.0000	1.0000	26
0.0000	1.0000	27
0.0000	1.0000	28
0.0000 0.0000	1.0000 1.0000	29 30
0.0000	1.0000	30 31
0.0000	1.0000	32
0.0000	1.0000	33
0.0000	1.0000	34
0.0000	1.0000	35
0.0000	1.0000	36
0.0000	1.0000	37
0.0000	1.0000	38
0.0000	1.0000	39
0.0000	1.0000	40
0.0000	1.0000	41
0.0000	1.0000	42
0.0000	1.0000	43
0.0000	1.0000	44
0.0000	1.0000	45

Appendix G Signal Warrant Analysis

# 961-971 Meridian Avenue Residential Development

# 1 . Race Street & I-280 NB Off-Ramp (unsignalized)



Source: Figure 4C-3 of the Manual on Unifrom Traffic Control and Devices (MUTCD) from California Department of Transportation (Caltrans).

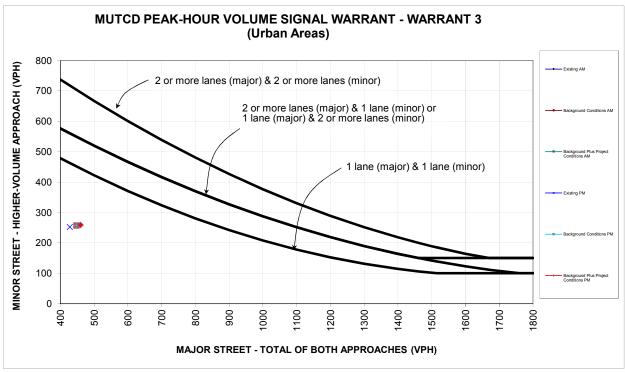
<sup>\* 150</sup> vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

				AM	Peak F	lour
		App	sting roach nes 2 or More	Existing AM	Background Conditions AM	Background Plus Project Conditions AM
Major Street - Both Approaches I-28	0 NB Off-Ramp (unsignali		X	540	540	543
Minor Street - Highest Approach	Race Street	Χ		176	178	181
Maximum warrant threshold for minor street volu	ume			498	498	496
Difference between warrant threshold & minor s	treet volume			322	320	315
	_	Warra	nt Met?	No	No	No

					PM	Peak F	lour
			App	sting roach nes 2 or More	Existing PM	Background Conditions PM	Background Plus Project Conditions PM
Major Street - Both Approaches	I-280	) NB Off-Ramp (unsignali		X	791	791	800
Minor Street - Highest Approach		Race Street	Χ		156	174	177
Maximum warrant threshold for minor stre	eet volu	me			374	374	370
Difference between warrant threshold & r	minor st	reet volume	218 200			200	193
			Warra	nt Met?	No	No	No

# 961-971 Meridian Avenue Residential Development

# 2 . Race Street/Cherry Avenue & Fruitdale Avenue (unsignalized)



Source: Figure 4C-3 of the Manual on Unifrom Traffic Control and Devices (MUTCD) from California Department of Transportation (Caltrans).

<sup>\* 150</sup> vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

				AM Peak Hour			
		App	sting roach nes 2 or More	Existing AM	Background Conditions AM	Background Plus Project Conditions AM	
Major Street - Both Approaches	Race Street/Cherry Avenue	Χ		334	344	348	
Minor Street - Highest Approach	Fruitdale Avenue (unsignalized)	Χ		150	152	155	
Maximum warrant threshold for minor street volume				518	512	509	
Difference between warrant threshold & minor street volume		•		368	360	354	
		Warra	nt Met?	No	No	No	

				PM Peak Hour			
		Арр	sting roach nes 2 or More	Existing PM	Background Conditions PM	Background Plus Project Conditions PM	
Major Street - Both Approaches	Race Street/Cherry Avenu	Χ		428	448	460	
Minor Street - Highest Approach	Fruitdale Avenue (unsignalized)	Χ		252	257	259	
Maximum warrant threshold for minor street volume				462	451	444	
Difference between warrant threshold & minor street volume				210	194	185	
		Warra	nt Met?	No	No	No	